As filed with the Securities and Exchange Commission on April 17, 2015.

Registration No. 333-198383

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

Amendment No. 6
To
FORM S-1
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 Number)

185 Berry Street, Suite 1300
San Francisco, California 94107
(415) 371-8300
(Address, including zip code, and telephone number, including area code, of registrant's principal executive office)

Lisa A. Conte
Chief Executive Officer and President
Jaguar Animal Health, Inc.
185 Berry Street, Suite 1300
San Francisco, California 94107
(415) 371-8300
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Donald C. Reinke **Marianne C. Sarrazin** **Reed Smith LLP** **101 Second Street, Suite 1800** **San Francisco, California 94105** **(415) 543-8700**	**Brad L. Shiffman** **Blank Rome LLP** **405 Lexington Avenue** **New York, NY 10174** **(212) 885-5000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement is declared effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 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, please 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(c) 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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting 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 ☒

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

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PRELIMINARY PROSPECTUS **SUBJECT TO COMPLETION** **DATED APRIL 17, 2015**

3,150,000 Shares
Common Stock

This is a firm commitment initial public offering 3,150,000 shares of our common stock by Jaguar Animal Health, Inc. No public market currently exists for our shares. We anticipate that the initial public offering price of our shares of common stock will be $7.00 per share.

Our common stock has been approved for listing on The NASDAQ Capital Market under the symbol "JAGX."

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012 and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

Our business and an investment in our securities involves a high degree of risk. See "Risk Factors" beginning on page 12 of this prospectus for a discussion of information that you should consider before investing in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Per Share	Total
Public offering price	$	$
Underwriting discounts and commissions[(1)]	$	$
Proceeds, before expenses, to us	$	$

(1) The underwriters will receive compensation in addition to the underwriting discount. The registration statement, of which this prospectus is a part, also registers for sale warrants to purchase 157,500 shares of our common stock to be issued to the representative of the underwriters. We have agreed to issue the warrants to the representative of the underwriters as a portion of the underwriting compensation payable to the underwriters in connection with this offering. See "Underwriting" beginning on page 125 of this prospectus for a description of compensation payable to the underwriters, including a description of the warrants.

We have granted a 45-day option to the underwriters to purchase up to 472,500 additional shares of common stock solely to cover over-allotments, if any.

The underwriters expect to deliver the shares against payment therefor on or about , 2015.

Sole Book-Running Manager

Aegis Capital Corp

Co-Managers

CRT Capital **Feltl and Company**

, 2015

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We have not, and the underwriters have not, authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under the circumstances and in the jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date. We are not, and the underwriters are not, making an offer of these securities in any jurisdiction where such offer is not permitted.

For investors outside the United States: we have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of securities and the distribution of this prospectus outside the United States.

Jaguar Animal Health, our logo, Canalevia and Neonorm are our trademarks that are used in this prospectus. This prospectus also includes trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, trademarks and tradenames referred to in this prospectus appear without the ©, ® or ™ symbols, but those references are not intended to indicate that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trademarks and tradenames.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider befo investing in our common stock. You should read this entire prospectus carefully, especially the section in this prospectus titled "Risk Factors" and our financi statements and related notes appearing elsewhere in this prospectus, before making an investment decision.

As used in this prospectus, references to "Jaguar," "we," "us" or "our" refer to Jaguar Animal Health, Inc.

Overview

Our Company

We are an animal health company focused on developing and commercializing first-in-class gastrointestinal products for companion and production animal Canalevia is our lead prescription drug product candidate for the treatment of various forms of watery diarrhea in dogs. We achieved statistically significant results in canine proof-of-concept study completed in February 2015, supporting the conclusion that Canalevia treatment is superior to placebo, with 91% of the Canalevi treated dogs achieving a formed stool during the study versus 50% of the placebo-treated dogs. We also initiated filing of a rolling new animal drug application, NADA, with the U.S. Food and Drug Administration, or FDA, for Canalevia for chemotherapy-induced diarrhea, or CID, in dogs, at the end of 2014. Canalevia is canine-specific formulation of crofelemer, an active pharmaceutical ingredient isolated and purified from the *Croton lechleri* tree. A human-specific formulation crofelemer, Fulyzaq, was approved by the FDA in 2012 for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therap Members of our management team developed crofelemer, including while at Napo Pharmaceuticals, Inc., or Napo. Neonorm is our lead non-prescription product improve gut health and normalize stool formation in animals suffering from watery diarrhea, or scours. We launched Neonorm in the United States at the end of 201 for preweaned dairy calves under the brand name Neonorm Calf and expect to launch additional formulations of Neonorm for other animal species in 2015. We hav already shipped approximately $450,000 of Neonorm Calf to distributors. Neonorm is a botanical extract also derived from the *Croton lechleri* tree. Canalevia an Neonorm are distinct products that are formulated to address specific species and market channels. We have filed nine investigational new animal drug applications, INADs, with the FDA and intend to develop species-specific formulations of Neonorm in six additional target species.

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 emergenc room, yet there are no FDA-approved anti-secretory products for the treatment of diarrhea. We estimate that in the United States, veterinarians see approximate six million annual cases of acute and chronic watery diarrhea in dogs, approximately two-thirds of which are acute watery diarrhea. We believe Canalevia will b effective in treating watery diarrhea because it acts at the last physiological step, conserved across mammalian species, in the manifestation of watery diarrhe regardless of cause, by normalizing ion and water flow in the intestinal lumen. We are first seeking a minor use, minor species, or MUMS, designation from the FD for Canalevia for CID in dogs to shorten the timeframe to commercialization. If we receive conditional approval pursuant to MUMS designation, we expect commercialize Canalevia for CID in dogs in early 2016. We completed a canine proof-of-concept study in February 2015, with statistically significant results, support of protocol concurrence discussions with the FDA regarding expansion of labeled indications of watery diarrhea beyond CID to include general wate diarrhea. We plan to market Canalevia, if approved, through a focused direct sales force and to complement our internal efforts with distribution partners.

According to the Dairy 2007 study conducted by the United States Department of Agriculture, or USDA, almost one in four preweaned dairy heifer, or femal calves suffers from diarrhea or other digestive problems. The preweaning period is generally the first 60 days after birth. Scours, diarrhea or other digestive problem are responsible for more than half of all preweaned heifer calf deaths, and result in supportive care and treatment costs, impaired weight gain and long-term reductio in milk production.

We believe the incidence rate of scours and its corresponding financial impact represent a large opportunity and that Neonorm has the potential to effectively meet th need. In our clinical study completed in May 2014, Neonorm demonstrated a statistically significant reduction in the severity of watery diarrhea, reduced morbidi and mortality, and improved weight gain as compared to placebo in newborn dairy calves with scours.

We recently launched Neonorm for preweaned dairy calves under the brand name Neonorm Calf. Our commercialization activities are initially focusing on larg commercial dairy operations and include active ongoing education and outreach to dairy industry key opinion leaders, such as academics involved in dairy catt research or who advise the dairy cattle industry, as well as veterinarians. We intend to augment these commercialization efforts by working with regional distributors leverage the geographic concentration of the dairy market in the United States as well as national distributors to provide wider geographic access to our products. W recently signed a distribution agreement with a veterinary biotechnology company in Latin America for exclusive distribution rights of Neonorm Calf in Argentin Brazil, Paraguay, Uruguay, and Bolivia. In addition, where appropriate, we intend to explore other international distribution and partnership arrangements. In Augu 2014, we entered into our first regional distribution agreement for the Upper Midwest region, and in September 2014, entered into an agreement with a national mast distributor, who also distributes prescription products for the companion animal market. We expect the ongoing launch of Neonorm to drive awareness amor veterinarians regarding the utility of our first-in-class anti-secretory *Croton lechleri*-derived products, including Canalevia.

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

Our management team has significant experience in gastrointestinal and animal health product development. This experience includes the development crofelemer for human use, from discovery and preclinical and clinical toxicity studies, including the existing animal studies to be used for Canalevia regulato approvals, through human clinical development. Our team also includes individuals who have prior animal health experience at major pharmaceutical companie including SmithKline Beecham Corporation, now GlaxoSmithKline LLC, the animal health group of Pfizer Inc., now Zoetis Inc., Vétoquinol S.A., Merial Limited, th animal health division of Sanofi S.A., as well as management experience at major veterinary hospital institutions.

Product Pipeline

We are developing a pipeline of prescription drug product candidates and non-prescription products to address unmet needs in animal health. Our pipeli currently includes prescription drug product candidates for eight indications across multiple species, and non-prescription products targeting seven species.

Prescription Drug Product Candidates

Product Candidates	Species	Indication	Recent Developments	Anticipated Near-Term Milestones
Canalevia	Dogs	CID	• MUMS designation / pre-NADA meeting in October 2014 • Initiated rolling NADA filing in December 2014	• Conditional NADA approval in 1st quarter of 2016
	Dogs	General watery diarrhea	• IND filed in February 2014 • Statistically significant proof-of-concept data in February 2015	• Concurrence meeting with FDA in 2015 • Initiation of pivotal trial in 2015 • Initiate filing NADA in 1st quarter of 2016
Species-specific formulations of crofelemer	Horses	Acute colitis	• IND filed in February 2014	• Safety data in 2nd half of 2015 • Apply for MUMS designation in 2nd half of 2015
	Horses	Diarrhea, colonic and gastric ulcers(1)	• IND filed in February 2015	• Proof-of-concept data in 2nd half of 2015
	Cats	General watery diarrhea	• IND filed in February 2014 • Initiated safety and palatability study in cats with diarrhea in March 2015	• Safety and proof-of-concept data in 2nd half of 2015/1st quarter of 2016
Virend (topical)	Cats	Herpes virus	• IND filed in July 2014	• Proof-of-concept and top line pivotal efficacy data in 1st quarter of 2016
Species-specific formulations of NP-500	Dogs	Obesity-related metabolic dysfunction	• IND filed September 2014	
	Horses	Metabolic syndrome	• IND filed in March 2014	
	Cats	Type II diabetes	• IND filed in March 2014	

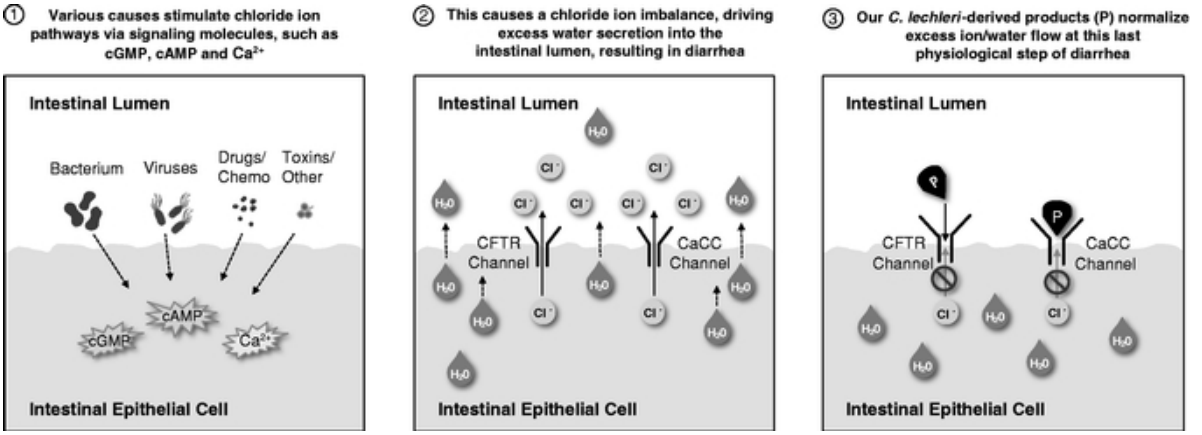
(1) In combination with omeprazole and/or sucralfate.

Non-Prescription Products

Products	Species	Use	Recent Developments	Anticipated Near-Term Milestones
Neonorm Calf	Dairy calves	Improve gut health and normalize stool formation in preweaned dairy calves with scours	• National launch in February 2015 • U.S. regional and nationwide distribution agreements signed in 2nd half of 2014 • South American distribution agreement signed in 1st quarter of 2015, commercial launch in 2016 • Approximately $450,000 of product shipped since commercial launch	• Field study results in 2nd quarter of 2015 (study has been ongoing since 4th quarter of 2014); includes evaluation of prebiotic effect
Species-specific formulations of Neonorm	Horse foals	Normalize stool formation	• Completed pilot formulation in April 2014 • Completed safety and palatability study in November 2014	• Safety and efficacy data in 2nd half of 2015 • Commercial launch in 2015
	Adult horses	Normalize stool formation		• Safety and efficacy data in 1st quarter of 2016
	Other farm/production animals	Normalize stool formation	• Initiated market research in New Zealand and China in 2014	• Initiate proof-of-concept studies based on market research within th next 12 months

Novel Mechanism of Action

Our anti-secretory gastrointestinal products and product candidates act by normalizing the flow of ions and water in the intestinal lumen, the dysregulation o which is the last step common to the manifestation of watery diarrhea. As a result, we believe that our products and product candidates may be effective in addressin watery 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 actio of our gastrointestinal products), are generally present in mammals. We therefore expect that the clinical benefit shown in humans, preweaned dairy calves and dog will be confirmed in multiple other species, including cats and horses. Accordingly, we believe we can bring to market multiple products for a range of species that a first-in-class and effective in preventing the debilitating and devastating ramifications of watery diarrhea in companion and production animals. The following diagra illustrates the mechanism of action of our gastrointestinal products and product candidates, which normalize chloride and water flow and transit time of fluids with the intestinal lumen.



We have recently supplemented our anti-secretory product line by filing intellectual property for combinations with rifaximin, a non-absorbed antibioti Rifaximin is approved for human use for the treatment of traveler's diarrhea and chronic administration for hepatic encephalopathy. It is not approved for or administration in veterinary health, and provides another opportunity for local drug administration (*i.e.*, non-systemic) in the gut of the animal to target bacterial cause of watery diarrhea coincident with an anti-secretory approach to normalization of ion and water flow associated with watery diarrhea.

Business Strategy

Our goal is to become a leading animal health company with first-in-class products that address unmet medical needs in both the companion and productio animal markets. To accomplish this goal, we plan to:

- ***Leverage our significant gastrointestinal knowledge, experience and intellectual property portfolio to develop a line of Croton lechleri-derive products for both production and companion animals.*** In addition to Canalevia for dogs and Neonorm for preweaned dairy calves, we are developin formulations of these products across multiple animal species and market channels.

- ***Establish commercial capabilities, including third-party sales and distribution networks and our own targeted commercial efforts, through th launch of Neonorm.*** We recently launched Neonorm in the United States under the brand name Neonorm Calf. We intend to establish a focused dire sales force for both the companion and production animal markets, as well as continue to partner with leading distributors to commercialize ou products.

- ***Launch Canalevia and our other product candidates for companion animals, if approved, leveraging the commercial capabilities and bran awareness we are currently building.*** We believe the ongoing Neonorm launch will allow us to establish sales and marketing capabilities in advance o the

planned launch of Canalevia for both CID (early 2016) and general watery diarrhea (2016) in dogs, to build corporate brand identity awareness, and establish distributor relationships relevant to both our non-prescription and prescription drug product lines.

- ***Expand to international markets.*** We intend to leverage our proprietary product development in the United States to international markets, wi meaningful partnerships to address international requirements for product development, registration, and access to commercialization in releva markets for each of our prescription and non-prescription products. We may also enter into partnerships that include payment of upfront licensing fe for our 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 our broad intellectual property portfoli deep pipeline and extensive botanical library.*** In addition to our gastrointestinal pipeline product candidates, both *Croton lechleri* and rifaximin-base we are also developing products such as Virend for feline herpes and NP-500 for Type II diabetes and metabolic syndrome, both of which have be through Phase 2 human clinical testing. We have exclusive worldwide rights to a library of over 2,300 medicinal plants for all veterinary treatment us and indications for all species of animals.

Risks Related to Our Business

Our business, and our ability to execute our business strategy, is subject to a number of risks as more fully described in the section titled "Risk Factors." Thes risks include, among others, the following:

- We have a limited operating history, have not yet generated any material revenues, expect to continue to incur significant research and development an other expenses, and may never become profitable. Our independent registered public accounting firm has expressed substantial doubt about our abili to continue as a going concern.

- We have never generated any material revenue from operations and may need to raise additional capital to achieve our goals.

- We are substantially dependent on the success of our current lead prescription drug product candidate, Canalevia, and non-prescription produc Neonorm, and cannot be certain that necessary approvals will be received or that these products will be successfully commercialized, either by us any of our partners.

- We are dependent upon our license agreement with Napo, and if this agreement is terminated, we will be unable to commercialize our products and o business will be harmed.

- The results of earlier studies may not be predictive of the results of our pivotal trials or other future studies, and we may be unable to obtain an necessary regulatory approvals for our existing or future prescription drug product candidates under applicable regulatory requirements.

- Development of prescription drug products, and to a lesser extent, non-prescription products, for the animal health market is inherently expensiv time-consuming and uncertain, and any delay or discontinuance of our current or future pivotal trials, or dosage or formulation studies, would harm o business and prospects.

- Even if we obtain any required regulatory approvals for our current or future prescription drug product candidates, they may never achieve mark acceptance or commercial success.

- We are dependent upon contract manufacturers for supplies of our current prescription drug product candidates and non-prescription products an intend to rely on contract manufacturers for commercial quantities of any of our commercialized products.

- If we are not successful in identifying, developing and commercializing additional prescription drug product candidates and non-prescription product our ability to expand our business and achieve our strategic objectives would be impaired.

Corporate Information

We were founded in San Francisco, California as a Delaware corporation on June 6, 2013. Napo formed our company to develop and commercialize anim health products. As of December 31, 2013, we were a wholly-owned subsidiary of Napo, and as of December 31, 2014, we are a majority-owned subsidiary of Nap Upon the closing of this offering, we will no longer be majority-owned by Napo. See "Certain Relationships and Related Person Transactions—Transactions wi Napo" and "—Napo Arrangements" for information regarding our transactions with Napo.

Our executive offices are located at 185 Berry Street, Suite 1300, San Francisco, California 94107, and our telephone number is (415) 371-8300. Our websi address is www.jaguaranimalhealth.com. The information contained on, or that can be accessed through, our website is not part of, and is not incorporated by referenc into this prospectus and should not be considered to be part of this prospectus.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For so long as we remain a emerging growth company, we are permitted and intend to rely on exemptions from specified disclosure requirements that are applicable to other public companie that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, wi correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachu payments not previously approved.

We can take advantage of these provisions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be a emerging growth company if we were to generate more than $1.0 billion in annual revenues, have more than $700.0 million in market value of our capital stock he by non-affiliates or issue more than $1.0 billion of non-convertible debt over a three-year period. As an emerging growth company, we may choose to take advantag of some, but not all, of the available exemptions. We have taken advantage of some reduced reporting burdens in this prospectus. Accordingly, the informatio contained herein may be different than the information you receive from other public companies in which you hold stock.

The Offering

Common stock offered by us	3,150,000 shares (or 3,622,500 shares if the underwriters exercise their option to purchase additional shares in full)
Common stock to be outstanding after this offering	8,409,923 shares (or 8,882,423 shares if the underwriters exercise their option to purchase additional shares in full)
Option to purchase additional shares	We have granted the underwriters a 45-day option to purchase up to 472,500 additional shares of our common stock to cover over-allotments, if any.
Use of proceeds	We intend to use the net proceeds from this offering for development work for Canalevia and our other prescription drug products, for studies and commercial activities related to Neonorm, for formulation costs and establishing contract manufacturing capabilities, repayment of $1.3 million of indebtedness and for other research and product development activities, working capital and general corporate purposes. See "Use of Proceeds" for a more detailed description of the intended use of proceeds from this offering.
Risk factors	See "Risk Factors" and other information included in this prospectus for a discussion of factors that you should consider carefully before deciding to invest in our common stock.
Proposed NASDAQ Capital Market symbol	"JAGX"

The number of shares of common stock to be outstanding after this offering is based on 5,259,923 shares of common stock outstanding as of December 31, 201 and excludes:

- 207,664 shares of common stock issuable upon exercise of outstanding warrants as of December 31, 2014 with an exercise price of $2.5281 per share;
- 16,666 shares of common stock issuable upon exercise of an outstanding warrant as of December 31, 2014 with an exercise price of $6.30 per share;
- 269,938 shares of our common stock issuable upon exercise of outstanding warrants as of December 31, 2014 with an exercise price of $5.60 per shar
- 111,605 shares of common stock issuable upon exercise of outstanding warrants issued after December 31, 2014 with an exercise price of $5.60 p share;
- 659,554 shares issuable upon exercise of outstanding options as of December 31, 2014 with a weighted-average exercise price of $2.67 per share;
- 68,902 shares issuable upon vesting of outstanding restricted stock unit awards, or RSUs, as of December 31, 2014;
- 1,484 shares issuable upon vesting of outstanding RSUs issued after December 31, 2014;
- 203,030 shares issuable upon exercise of stock options, which were authorized after December 31, 2014, and which will be granted effective upon th offering with an exercise price equal to the initial public offering price;

- up to 44,642 shares of common stock issuable upon conversion of outstanding convertible promissory notes in the aggregate principal amount $250,000 issued after December 31, 2014;

- 25,197 shares of common stock reserved for future issuance under our 2013 Equity Incentive Plan; and after taking into account the grant of an equi awards for an aggregate of 204,514 shares under our 2013 Equity Incentive Plan after December 31, 2014; and

- 333,333 shares of common stock reserved for future issuance under our 2014 Stock Incentive Plan, which will become effective in connection with th offering, as well as any automatic increases in the shares of common stock reserved for future issuance under the 2014 Stock Incentive Plan.

Unless otherwise indicated, the information in this prospectus assumes the following:

- a 1-for-1.5 reverse stock split of our common stock effected on October 27, 2014;

- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, which will be in effect upo the closing of this offering;

- the conversion of all 3,015,902 outstanding shares of Series A preferred stock into 2,010,596 shares of common stock upon the closing of this offering

- the issuance of 374,997 shares of common stock upon the conversion of convertible promissory notes in the aggregate principal amount of $2,100,00 upon the closing of this offering at a conversion price of $5.60 per share (which includes $1,000,000 aggregate principal amount issued after Decemb 31, 2014), and which shares will be unregistered;

- no conversion into shares of common stock of up to $1.0 million aggregate principal amount of borrowings under our standby letter of credit entere into in August 2014;

- no exercise of outstanding options or warrants, or issuance of shares upon the vesting of restricted stock units; and

- no exercise by the underwriters of their option to purchase additional shares of common stock.

Recent Developments

Subsequent to December 31, 2014, we completed the following transactions and issuances of securities.

In February 2015, we issued an additional $250,000 aggregate principal amount of convertible promissory notes to two accredited investors and amended ar restated the terms of the $650,000 convertible promissory notes issued in December 2014 to conform the terms. All $900,000 aggregate principal amount of thes notes bear interest at 12% per annum and become payable upon demand by the holders within 30 days following this offering. In the event this offering consummated on, or prior to, June 30, 2015, the noteholders may convert the notes at a conversion price equal to $5.60 per share (80% of the initial public offerin price). If these notes have not been converted prior to July 31, 2015, nor declared due and payable by the holders within 30 days after this offering, the maturity da will automatically be extended to July 31, 2016 if we have not otherwise elected to prepay these notes within 30 days after this offering. We also issued these investo three-year warrants to purchase an aggregate of 80,355 shares of our common stock (determined by dividing 50% of the corresponding original principal amou issued by the current exercise price). If this offering is consummated prior to June 30, 2015, the exercise price will be $5.60 per share. In March 2015, holders $650,000 aggregate principal amount of these notes issued in December 2014 irrevocably elected to have their notes automatically convert into shares of our commo stock upon the closing of this offering at a conversion price of $5.60 per share. Accordingly, we expect to issue these holders an aggregate of 116,070 shares of ou common stock.

In March 2015, we entered into a non-binding letter of intent with Dechra Pharmaceuticals PLC, pursuant to which we agreed to negotiate a licensing agreeme for rights to commercialize our leading prescription drug product candidate, Canalevia, for dogs in the European Union. In connection therewith, Dechra purchase $1.0 million of our convertible promissory notes, the terms of which provide that such notes will automatically convert into shares of our common stock upon th closing of this offering at a conversion price of $5.60 per share. In connection with the purchase of the notes, we also issued Dechra a warrant to purcha approximately 89,285 shares at $5.60 per share, which expires December 31, 2017.

Summary Selected Financial Data

The following tables set forth a summary of our selected historical financial data as of and for the periods ended on the dates indicated. We have derived th statements of comprehensive loss data for the period from June 6, 2013 (inception) through December 31, 2013 and for the year ended December 31, 2014 from ou audited financial statements included elsewhere in this prospectus. You should read this data together with our financial statements and related notes appearin elsewhere in this prospectus and the sections in this prospectus titled "Selected Financial Data" and "Management's Discussion and Analysis of Financial Conditio and Results of Operations." The historical results are not necessarily indicative of the results to be expected for any future periods.

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
Statements of Comprehensive Loss Data:		
Operating expenses:		
General and administrative expense	$ 458,473	$ 4,095,324
Research and development expense	324,479	4,220,338
Total operating expenses	782,952	8,315,662
Loss from operations	(782,952)	(8,315,662)
Interest expense, net	(18,251)	(345,336)
Change in fair value of warrants	—	51,423
Net loss and comprehensive loss	$ (801,203)	$ (8,609,575)
Accretion of redeemable convertible preferred stock	—	(646,673)
Net loss attributable to common stockholders	$ (801,203)	$ (9,256,248)
Net loss per share attributable to common stockholders, basic and diluted(1)	$ (0.30)	$ (3.24)
Weighted-average common shares outstanding, basic and diluted(1)	2,666,666	2,854,417
Pro forma net loss per share, basic and diluted(1)	$ (0.30)	$ (2.02)
Pro forma weighted-average number of common shares outstanding, basic and diluted(1)	2,666,666	4,592,283

(1) See Notes 2 and 13 to our financial statements for a description of the method used to compute basic and diluted net loss per share and pr forma net loss per share.

	As of December 31, 2014		
	Actual	Pro Forma(1) (unaudited)	Pro Forma, As Adjusted(2)(3)
Balance Sheet Data:			
Cash and cash equivalents	$ 845,192	$ 2,095,192	$ 18,301,692
Total assets	4,506,630	5,756,630	21,963,130
Convertible notes payable	424,674	250,000	250,000
Notes payable	478,709	478,709	—
Warrant liability	601,889	—	—
Total liabilities	5,436,964	4,660,401	4,181,692
Redeemable convertible preferred stock	7,304,914	—	—
Total stockholders' equity (deficit)	(8,235,248)	1,096,229	17,781,438

(1) Pro forma column reflects (i) the conversion of all 3,015,902 outstanding shares of Series A preferred stock into 2,010,596 shares of commo stock upon the closing of this offering; (ii) the issuance of 374,997 shares of common stock upon the conversion of convertible promisso notes in the aggregate principal amount of $2,100,000 upon the closing of this offering at a conversion price equal to $5.60 per share; (iii) t issuance of $1,250,000 aggregate principal amount of convertible promissory notes after December 31, 2014 ($1,000,000 of which w convert into shares of common stock upon the closing of this offering); (iv) the modification in March 2015 of $650,000 aggregate princip amount of convertible promissory notes issued in December 2014 to automatically convert into shares of common stock upon the closing this offering at a conversion price equal to $5.60 per share; and (v) the filing and effectiveness of our amended and restated certificate incorporation upon the closing of this offering.

(2) Pro forma as adjusted column further reflects (i) the sale of 3,150,000 shares of common stock that we are offering at an initial public offeri price of $7.00 per share, after deducting underwriting discounts and estimated offering expenses payable by us and (ii) the repayment of o $1.0 million standby bridge facility.

(3) A $1.00 increase (decrease) in the initial public offering price of $7.00 per share would increase (decrease) each of cash and cash equivalent total assets and total stockholders' equity (deficit) on a pro forma as adjusted basis by approximately $2.9 million, assuming the number shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts a estimated offering expenses payable by us. An increase (decrease) of 1,000,000 shares in the number of shares offered by us would increas (decrease) each of cash and cash equivalents, total assets, and total stockholders' equity (deficit) on a pro forma as adjusted basis b approximately $6.5 million, assuming the initial public offering price remains the same, and after deducting underwriting discounts. The p forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual initial public offering price a other terms of this offering determined at pricing.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and prospects. In such an event, the market price of our common stock could decline, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may harm our business, financial condition, results of operations and prospects.

Risks Related to Our Business

We have a limited operating history, expect to incur further losses as we grow and may be unable to achieve or sustain profitability. Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.

Since formation in June 2013, our operations have been primarily limited to the research and development of our lead prescription drug product candidate, Canalevia, to treat various forms of watery diarrhea in dogs, and our lead non-prescription product, Neonorm, to improve gut health and normalize stool formation in preweaned dairy calves with scours, and the recent commercial launch of Neonorm. As a result, we have limited meaningful historical operations upon which to evaluate our business and prospects and have not yet demonstrated an ability to broadly commercialize any of our products, obtain any required marketing approval for any of our prescription drug product candidates or successfully overcome the risks and uncertainties frequently encountered by companies in emerging fields such as the animal health industry. We also have not generated any material revenue to date, and expect to continue to incur significant research and development and other expenses. Our net loss and comprehensive loss for the year ended December 31, 2014 was $8,609,575. As of December 31, 2014, we had an accumulated deficit of $9,410,778. We expect to continue to incur losses for the foreseeable future, which will increase significantly from historical levels as we expand our product development activities, seek necessary approvals for our product candidates, conduct species-specific formulation studies for our non-prescription products and begin commercialization activities. Even though we recently commercially launched Neonorm and if we succeed in developing and broadly commercializing one or more of our products or product candidates, we expect to continue to incur losses for the foreseeable future, and we may never become profitable. If we fail to achieve or maintain profitability, then we may be unable to continue our operations at planned levels and be forced to reduce or cease operations.

Our auditors have included an explanatory paragraph in their audit report on our financial statements for the year ended December 31, 2014, regarding our assessment of substantial doubt about our ability to continue as a going concern. Our financial statements do not include any adjustments that may result from the outcome of this uncertainty. We believe that the successful completion of this offering will eliminate the doubt and enable us to continue as a going concern. However, if we are unable to continue as a viable entity, our stockholders may lose their entire investment.

We have never generated any material revenue from operations and may not generate any material revenue from our operations in the foreseeable future.

We are an animal health company focused on developing and commercializing prescription drug and non-prescription products for companion and production animals. Since formation in June 2013, we have not generated any material revenue from operations. There is no guarantee that our recent commercial launch of Neonorm for preweaned dairy calves in the United States will be successful or that we will be able to sell any products in the future. Further, in order to commercialize our prescription drug product candidates, we must receive regulatory approval from the FDA in the United States and other regulatory

agencies in various jurisdictions. We have not yet received any regulatory approvals for our prescription drug product candidates. In addition, certain of our non-prescription products, such as Neonorm, may be subject to regulatory approval outside the United States prior to commercialization. Accordingly, until and unless we receive any necessary regulatory approvals, we cannot market or sell our products. Moreover, even if we receive the necessary approvals, we may not be successful in generating revenue from sales of our products as we do not have any meaningful experience marketing or distributing our products. Accordingly, we may never generate any material revenue from our operations.

We expect to incur significant additional costs as we begin commercialization efforts for Neonorm, and undertake the clinical trials necessary to obtain regulatory approvals for Canalevia, which will increase our losses.

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

We are actively identifying additional products for development and commercialization, and will continue to expend substantial resources for the foreseeable future to develop Canalevia and Neonorm and develop products from the library of over 2,300 medicinal plants that we have 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 our intellectual property;
- obtaining necessary regulatory approvals;
- establishing commercial supply capabilities; and
- sales, marketing and distribution of our commercialized products.

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

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

We may need to raise additional capital to achieve our business goals and such funding may not be available to us on acceptable terms, or at all, which would force us to delay, limit, reduce or terminate one or more of our product development programs or future commercialization efforts.

We believe the net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operating plan through April 2016 and anticipated commercial launch of Canalevia for CID in dogs, as well as for the pivotal data and regulatory filing with the FDA to expand the indication to general watery diarrhea in dogs. However, we may experience unexpected events that require us to seek additional funds sooner than planned through public or private equity or debt financings or other sources such as strategic collaborations. We do not expect that the net proceeds from this offering will be sufficient to complete the development of all the current products in our pipeline, or any additional products we may identify. We may need to raise additional capital to fund these activities. Other than our standby line of credit (under which we had $1.0 million available as of December 31, 2014), we have no current agreements or arrangements with respect to any such financings or collaborations, and any such financings or collaborations may result in dilution to our stockholders, the imposition of debt covenants and repayment obligations or other restrictions that may harm our business or the value of our common stock. We may also seek from time to time to raise additional capital based upon favorable market conditions or strategic considerations such as potential acquisitions.

Our future capital requirements depend on many factors, including, but not limited to:

- the scope, progress, results and costs of researching and developing our current and future prescription drug product candidates and non-prescription products;
- the timing of, and the costs involved in, obtaining any regulatory approvals for our current and any future products;
- the number and characteristics of the products we pursue;
- the cost of manufacturing our current and future products and any products we successfully commercialize;
- the cost of commercialization activities for Neonorm 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;
- our 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 we need them on terms that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we may be required to delay, limit, reduce or terminate one or more of our product development programs or future commercialization efforts.

We are substantially dependent on the success of Canalevia and Neonorm and cannot be certain that Canalevia will be approved or that we can successfully commercialize these products.

We currently do not have regulatory approval for any of our prescription drug product candidates, including Canalevia. Our current efforts are primarily focused on the commercial launch of Neonorm in the United States, and development efforts related to Canalevia for CID in dogs. We are also focused on expanding Canalevia's proposed indications to cover general watery diarrhea in dogs and full FDA approval for CID for dogs. Accordingly, our near-term prospects, including our ability to generate material

product revenue, obtain any new financing if needed to fund our business and operations or enter into potential strategic transactions, will depend heavily on the success of Neonorm and, if approved, 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 our management team, including Lisa A. Conte, our Chief Executive Officer and President, and Steven R. King, Ph.D., our 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 our 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, we entered into the Napo License Agreement pursuant to which we 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 our employees. If we are not successful in the development and commercialization of Neonorm and Canalevia, our business and our prospects will be harmed.

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

- the successful completion of the pivotal trials and toxicology studies for Canalevia, which may take significantly longer than we currently anticipate and will depend, in part, upon the satisfactory performance of third-party contractors;
- our ability to demonstrate to the satisfaction of the FDA and any other regulatory bodies, the safety and efficacy of Canalevia;
- our ability and that of our contract manufacturers to manufacture supplies of Neonorm 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;
- our ability to successfully launch Neonorm, whether alone or in collaboration with others;
- our ability to successfully launch Canalevia assuming approval is obtained, whether alone or in collaboration with others;
- the availability, perceived advantages, relative cost, relative safety and relative efficacy of our prescription drug product candidates and non-prescription products compared to alternative and competing treatments;

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

- our ability to achieve and maintain compliance with all regulatory requirements applicable to our business; and

- our ability to obtain and enforce our intellectual property rights and obtain marketing exclusivity for our 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 our control. Accordingly, we may not be successful in developing or commercializing Neonorm, Canalevia or any of our other potential products. If we are unsuccessful or are significantly delayed in developing and commercializing Neonorm, Canalevia or any of our other potential products, our business and prospects will be harmed and you may lose all or a portion of the value of your investment in our common stock.

If we are not successful in identifying, licensing, developing and commercializing additional product candidates and products, our ability to expand our business and achieve our strategic objectives could be impaired.

Although a substantial amount of our efforts are focused on the commercial launch of Neonorm and the continued development and potential approval of Canalevia, a key element of our strategy is to identify, develop and commercialize a portfolio of products to serve the animal health market. Most of our potential products are based on our knowledge of medicinal plants. Our 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, we may be unable to further develop these potential products because of perceived regulatory and commercial risks. Even if we successfully identify potential products, we may still fail to yield products for development and commercialization for many reasons, including the following:

- competitors may develop alternatives that render our potential products obsolete;

- potential products we seek 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;

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

Our animal health products face significant competition from other pharmaceutical companies and our operating results will suffer if we fail to compete effectively.

The development and commercialization of animal health products is highly competitive and our success depends on our ability to compete effectively with other products in the market. We expect to compete with the animal health divisions of major pharmaceutical and biotechnology companies such as Merck Animal Health, Merial Limited, 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. We are 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. We also compete 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 watery diarrhea in dogs, we anticipate 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 our 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 our products and product candidates may achieve.

Many of our competitors and potential competitors have substantially more financial, technical and human resources than we do. 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, we cannot be certain that we and our products can compete effectively.

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

The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of animal health products are subject to extensive regulation. We are usually not permitted to market our prescription drug product candidates in the United States until we receive approval of an NADA from the FDA. To gain approval to market an animal prescription drug for a particular species, we must provide the FDA with efficacy data from pivotal trials that adequately demonstrate that our prescription drug product candidates are safe and effective in the target species (*e.g.*, dogs, cats or horses) for the intended indications. In addition, we must provide manufacturing data evidencing that we can produce our product candidates in accordance with cGMP. For the FDA, we must also provide data from toxicology studies, also called target animal safety studies, and in some cases environmental impact data. In addition to our internal activities, we will partially rely on contract research organizations, or CROs, and other third parties to conduct our 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 us 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 us or our CROs. Our pivotal trials may fail to show the desired safety or efficacy of our 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

our 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 our prescription drug product candidates for many reasons, including:

- if they disagree with our interpretation of data from our pivotal studies or other development efforts;
- if we are unable to demonstrate to their satisfaction that our product candidate is 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 our current and future product candidates; and
- if they fail to approve the manufacturing processes of our third-party contract manufacturers.

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

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

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

Our product pipeline includes a number of species-specific formulations of Neonorm, our lead non-prescription product. We intend to use a portion of the proceeds of this offering for formulation costs associated with developing such species-specific formulations. The results of our dairy calf studies and other initial development activities and of any previous studies in humans or animals conducted by us 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 our 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 we obtain promising results from our species-specific formulation studies, we may not successfully commercialize any line extension. Because line extensions are developed for a particular species market, we may not be able to leverage our experience from the commercial launch of Neonorm Calf in new animal species markets. If we are not successful in developing and successfully commercializing these line extension products, we may not be able to grow our revenue and our business may be harmed.

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

Development of prescription drug products for animals remains an inherently lengthy, expensive and uncertain process, and our development activities may not be successful. We do not know whether our current or planned pivotal trials for any of our product candidates, will begin or conclude on time, and they may be delayed or discontinued for a variety of reasons, including if we are 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, 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 our development efforts will increase our costs, delay our development efforts and approval process and jeopardize our ability to commence product sales and generate revenue. Any of these occurrences may harm our business, financial condition and prospects. In addition, factors that may cause a delay in the commencement or completion of our development efforts may also ultimately lead to the denial of regulatory approval of our product candidates which, as described above, would harm our business and prospects.

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

We will partially rely upon CROs to conduct our toxicology studies and for other development activities. We intend to rely on CROs to conduct one or more of our planned pivotal trials. These CROs are not our employees, and except for contractual duties and obligations, we have limited ability to control the amount or timing of resources that they devote to our programs or manage the risks associated with their activities on our behalf. We are responsible for ensuring that each of our studies is conducted in accordance with the development plans and trial protocols presented to regulatory authorities. Any deviations by our CROs may adversely affect our ability to obtain regulatory approvals, subject us to penalties or harm our credibility with regulators. The FDA and foreign regulatory authorities also require us and our 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 our 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 our CROs to reasonably cooperate with us at our expense for an orderly winding down of the CROs' services under the agreements. If the CROs conducting our 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, we may need to secure new arrangements with alternative CROs, which could be difficult and costly. In such event, our 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 our product candidates may be delayed and we may be required to expend substantial additional resources.

Even if we obtain regulatory approval for Canalevia or our other product candidates, they may never achieve market acceptance. Further, even if we are successful in commercially launching Neonorm, it may not achieve commercial success.

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

- the safety of our products as demonstrated in our target animal studies;
- the indications for which our 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 our 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 our products;

- the prevalence and severity of any adverse side effects of our products;
- the relative convenience and ease of administration of our products; and
- the effectiveness of our sales, marketing and distribution efforts.

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

The dairy industry is subject to conditions beyond our control and the occurrence of any such conditions may harm our business and impact the demand for our 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 our control, including the following, any of which may harm our 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 our products;
- state and federal government policies, including government-funded programs or subsidies whose discontinuance or modification could erode the demand for our 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;
- adverse weather conditions and natural disasters, such as floods, droughts, and pestilence, which can lower dairy yields; and
- disease or other conditions beyond our control.

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

The success of our commercialization efforts will depend upon the perceived safety and effectiveness of animal health products, in general, and of our 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 our products, or human products derived from *Croton lechleri*, if any, could harm our 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, we could be exposed to increased product liability claims that could result in substantial losses to us if successful. In addition, some horses can be worth millions of dollars or more, and product liability for horses may be very high. While we currently have product liability insurance, such insurance may not be sufficient to cover any future product liability claims against us.

If we fail to retain current members of our senior management, or to identify, attract, integrate and retain additional key personnel, our business will be harmed.

Our success depends on our continued ability to attract, retain and motivate highly qualified management and scientific personnel. We are highly dependent upon our senior management, particularly

Lisa A. Conte, our President and Chief Executive Officer, and John A. Kallassy, our Executive Vice President, Chief Financial Officer, Chief Operating Officer and Treasurer. The loss of services of any of our key personnel would cause a disruption in our ability to develop our current or future product pipeline and commercialize our products and product candidates. Although we have 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 our former Chief Financial Officer, Charles O. Thompson, in September 2014, and the mutually agreed departure of our former Chief Veterinary Officer, Serge Martinod, D.V.M., Ph.D. in February 2015, caused us to incur additional expenses and expend resources to ensure a smooth transition with their respective successors, which diverted management attention away from executing our operational plan during this period. We currently do not maintain "key man" life insurance on any of our senior management team. The loss of Ms. Conte, Mr. Kallassy or other members of our current senior management could adversely affect the timing or outcomes of our current and planned studies, as well as the prospects for commercializing our 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, our headquarters are located in San Francisco, California, and the dairy and agriculture industries are not prevalent in urban areas such as San Francisco. We will need to hire additional personnel as we expand our product development and commercialization activities. Even if we are successful in hiring qualified individuals, as we are a growing organization, we do not have a track record for integrating and retaining individuals. If we are not successful in identifying, attracting, integrating or retaining qualified personnel on acceptable terms, or at all, our business will be harmed.

We are 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 our 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 our 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, we only have contracts with two suppliers to obtain CPL and arrange the shipment to our contract manufacturer. Accordingly, if our contract suppliers do not or are unable to comply with the terms of our respective agreements, and we are not able to negotiate new agreements with alternate suppliers on terms that we deem commercially reasonable, it may harm our business and prospects. The countries from which we 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 our cost and ability to produce Canalevia, Neonorm and anticipated line extensions.

We are 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 we have used in our studies and trials were obtained from Napo. We have also contracted with third parties for the formulation of API and botanical extract into finished products for our studies. We have entered into memorandums of understanding with Indena S.p.A. for the manufacture of CPL received from our suppliers into the API in Canalevia to support our 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, we have entered into a non-binding letter of intent 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 we have a right of reference. We also plan to contract with different third parties for the formulation and supply of finished products, which we will use in our planned studies and commercialization efforts. However, we have not entered into any definitive agreements with any third parties for the supply of commercial quantities of finished products.

We will be dependent upon our contract manufacturers for the supply of the API in Canalevia. We currently have sufficient quantities of the botanical extract used in Neonorm to support initial commercialization of Neonorm. However, we will require additional quantities of the botanical extract if our commercial launch of Neonorm is successful. If we are not successful in reaching agreements with third parties on terms that we consider commercially reasonable for manufacturing and formulation, or if our contract manufacturer and formulator are not able to produce sufficient quantities or quality of API, botanical extract or finished product under their agreements, it could delay our plans and harm our business prospects.

The facilities used by our third-party contractors are subject to inspections, including by the FDA, and other regulators, as applicable. We also depend on our third-party contractors to comply with cGMP. If our third-party contractors do not maintain compliance with these strict regulatory requirements, we and they will not be able to secure or maintain regulatory approval for their facilities, which would have an adverse effect on our operations. In addition, in some cases, we also are dependent on our third-party contractors to produce supplies in conformity to our 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 our third-party contractors if so required, or if it withdraws any such approval in the future, we may need to find alternative manufacturing or formulation facilities, which could result in delays in our ability to develop or commercialize our products, if at all. We and our 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 we may require multiple manufacturing processes and facilities for the same product candidate or any approved product. We are also exposed to risk if our third-party contractors do not comply with the negotiated terms of our agreements, or if they suffer damage or destruction to their facilities or equipment.

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

We currently have limited sales, marketing or distribution capabilities, and prior to our recent 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 our 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 our internal sales, marketing and distribution capabilities and entry into adequate arrangements with distributors or other partners would adversely impact the commercialization of Neonorm, and Canalevia, if approved. If we are not successful in commercializing Neonorm, Canalevia or any of our other line extension products, either on our own or through one or more distributors, or in generating upfront licensing or other fees, we may never generate significant revenue and may continue to incur significant losses, which would harm our financial condition and results of operations.

Changes in distribution channels for animal prescription drugs may make it more difficult or expensive to distribute our 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. We currently expect to market our animal prescription drugs directly to veterinarians, so any reduced reliance on veterinarians by animal owners could harm our business and prospects by making it more difficult or expensive for us to distribute our prescription drug products. Animal owners also 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 our 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 our business.

Consolidation of our customers could negatively affect the pricing of our products.

Veterinarians will be our primary customers for our prescription drug products, as well as, to some extent, our 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 us and other animal health product companies. Any downward pressure on the prices of any of our products could harm our operating results and financial condition.

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

As of March 31, 2015, we had 17 employees. Our ability to manage our growth effectively will require us to hire, train, retain, manage and motivate additional employees and to implement and improve our operational, financial and management systems. These demands also may require the hiring of additional senior management personnel or the development of additional expertise by our senior management personnel. If we fail to expand and enhance our operational, financial and management systems in conjunction with our potential future growth, it could harm our business and operating results.

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

The evaluation of our products and product candidates in target animals is required to develop, formulate and commercialize our products and product candidates. Although our 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, our research and development activities, and by extension our operating results and financial condition, could be harmed. In addition, negative publicity about animal practices by us or in our industry could harm our reputation among potential customers.

If approved, our 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 we want to expand the approved animals or indications, we will need to obtain additional approvals, which may not be granted.

If our prescription drug product candidates are approved by regulatory authorities, we 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. We intend to develop, promote and commercialize approved products for other animals and new treatment indications in the future, but we cannot be certain whether or at what additional time and expense we will be able to do so. If we do not obtain marketing approvals for other species or for new indications, our ability to expand our business may be harmed.

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 our products for extra-label uses, we may not promote our products for extra-label uses. If the FDA determines that any of our marketing activities constitute promotion of an extra-label use, we 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 our reputation and expose us to potential liability. We will continue to spend resources ensuring that our promotional claims for our products and product candidates remain compliant with applicable FDA laws and regulations, including materials we post or link to on our website. For example, in 2012, our 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 our prescription drug product candidates are approved by regulatory authorities, the misuse or extra-label use of such products may harm our reputation or result in financial or other damages.

If our 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 our 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 our reputation and lead to an increased risk of litigation. If we are 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 we modify our training or promotional materials and practices and we could be subject to significant fines and penalties, and the imposition of these sanctions could also affect our reputation and position within the industry. Any of these events could harm our reputation and our operating results.

We may not obtain or maintain the benefits associated with MUMS designation, including market exclusivity.

Although we requested MUMS designation for Canalevia for CID in dogs, we may not be granted MUMS designation. Even if granted, we may not receive or maintain the benefits associated with MUMS designation. As the sponsor, we are allowed under FDA regulations to apply for MUMS designation of our product candidate prior to its approval. MUMS designation is a status similar to "orphan drug" status for human drugs. If we are granted MUMS designation, we are eligible for incentives to support the approval or conditional approval of the designated use. This designation does not allow us to commercialize a product until such time as we obtain approval or conditional approval of the product.

If Canalevia receives MUMS designation for the identified particular intended use, we will be 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 our 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.

Even if granted, at some point, we could lose MUMS designation. The basis for a lost designation can include but is not limited to, our 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 our 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 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 our company, which includes but is not limited to, market exclusivity pursuant to MUMS designation, or eligibility for grants as a result of MUMS designation.

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

It is very difficult to estimate the commercial potential of any of our products because of the emerging nature of our industry as a whole. The animal health market continues to evolve and it is difficult to predict the market potential for our 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 our products is less than we anticipate due to one or more of these factors, it could negatively impact our business, financial condition and results of operations. Further, the willingness of companion and production animal owners to pay for our products may be less than we anticipate, 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 our products.

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

Upon the closing of this offering, Napo will beneficially own in the aggregate 31.7% of our common stock. This concentration of ownership gives Napo significant influence over the way we are managed and the direction of our business. In addition, because we and Napo are party to a license agreement, Napo's interests as the licensor of our technology may be different from ours or those of our other stockholders. As a result, the interests of Napo with respect to matters potentially or actually involving or affecting us, such as future acquisitions, licenses, financings and other corporate opportunities and attempts to acquire us, may conflict with the interests of our other stockholders. Further, Napo has pledged its interests in our common stock as security for certain of its monetary obligations. Accordingly, Napo's ability to take action with respect to these shares may be limited by its agreements with its secured lenders, which may conflict with your interests or those of our other stockholders. If these secured lenders were to foreclose on such shares, these lenders would have significant influence over the way we are managed and the direction of our business. In addition, our 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 our Chief Executive Officer, and the resolution of these conflicts may not always be in our 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, it could revise its business strategy in ways that could affect its relationship with our company. For example, it could decide to divest its assets, including its stock in our company. Napo's interests in managing its business, including its ownership in our company, may conflict with your interests.

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

We 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 our management's attention and uncertainties in our ability to maintain key business relationships of the acquired entities. In addition, if we undertake acquisitions, we 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, we may not be able to locate suitable acquisition opportunities and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

Certain of the countries in which we plan to commercialize our products in the future are developing countries, some of which have potentially unstable political and economic climates.

We may commercialize our products in jurisdictions that are developing and emerging countries. This may expose us to the impact of political or economic upheaval, and we could be subject to unforeseen administrative or fiscal burdens. At present, we are 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 we operate or plan to sell products either now or in the future may have a substantial adverse effect on our business, financial condition, trading performance and prospects.

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

As we expand our operations, we expect to be exposed to risks associated with foreign currency exchange rates. We anticipate that we 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, we 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. We do not currently employ any hedging or other strategies to minimize this risk, although we may seek to do so in the future.

Risks Related to Intellectual Property

We are dependent upon our license agreement with Napo and if the agreement is terminated for any reason our business will be harmed.

In January 2014, we entered into a license agreement with Napo, or the Napo License Agreement, which we amended and restated in August 2014 and further amended in January 2015. Pursuant to the Napo License Agreement, we 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. Under the terms of the Napo License Agreement, we are 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, we are obligated to pay a one-time non-refundable license fee and royalties. Napo has the right to terminate the Napo License Agreement upon our uncured material breach of the agreement or if we declare bankruptcy. If the Napo License Agreement is terminated for any reason, our 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 us pursuant to the Napo License Agreement and Napo's shares of our 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 our 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 us pursuant to the Napo License Agreement, should result in a fully-paid up license to us 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 us pursuant to the Napo License Agreement in such a manner that did not result in a fully-paid up 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 our 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 our company and the grant of an exclusive license to us.

Napo formed our company in June 2013, and in January 2014, we entered into the Napo License Agreement. Napo currently has no commercial operations and its potential sources of revenue 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 has been involved in litigation with Salix and has expended significant resources in the litigation. At the time of the formation of our company 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 our formation and Napo's grant of an exclusive license to us. One theory such a party could use to challenge our 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 we do not believe that our 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 our business.

We currently do not own any issued patents, most of our intellectual property is licensed from Napo and we cannot be certain that our patent strategy will be effective to enhance marketing exclusivity.

The patent prosecution process is expensive and time-consuming, and we 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 we 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, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from third parties. In particular, we are dependent upon Napo and its licensees to file, prosecute and maintain the intellectual property we license pursuant to the Napo License Agreement. The patents and patent applications we licensed from Napo, or the Napo Patents, which cover both human and veterinary uses, are also licensed by Napo to Salix for certain fields of human use. Under the terms of the collaboration agreement between Salix and Napo, or the Salix Collaboration Agreement, Napo and Salix agreed on who has the first right and responsibility to file, prosecute and maintain the Napo Patents. As a result, under the Napo License Agreement, we only have the right to maintain any issued patents within the Napo Patents that are not maintained in accordance with the rights and responsibilities of the parties under the Salix Collaboration Agreement. 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.

Napo has also licensed its *Croton lechleri* related intellectual property to Salix, Glenmark and Luye Pharma Group Limited to develop and commercialize crofelemer for human indications in various geographies. In May 2011, Napo filed a lawsuit against Salix in the Supreme Court of the State of New York, County of New York, alleging, among other items, that Salix had breached its collaboration agreement with Napo. By orders entered in December 2013 and January 2014, the court granted Salix's motion for partial summary judgment and narrowed the issues for trial. In February 2014, the jury rendered its verdict, concluding that Salix had complied with its contractual obligations in commercializing

Fulyzaq in the United States, and had not breached the collaboration agreement. In May 2014, Napo filed a notice of appeal from the court's partial summary judgment ruling as well as from certain court rulings and the judgment entered in February 2014. That appeal is pending. Fulyzaq is dependent upon intellectual property protection from the Napo Patents. Salix currently markets Fulyzaq in the United States for human use and has listed the three issued Napo Patents in the FDA's Orange Book for Fulyzaq. We rely on these issued Napo Patents as intellectual property protection for our 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 as provided in the Salix Collaboration Agreement, including due to a lack of financial resources, and we are not able to file and prosecute such patent application within the Napo Patents, our business may be harmed. Also, under the Salix Collaboration Agreement, Napo and Salix have agreed on who has the first right to enforce the Napo Patents against potential infringers. In addition, as between Napo and us, Napo has the first right to enforce the Napo Patents against potential infringers. If we are not the party who enforces the Napo Patents, we 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 our current or future licensors fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated.

We currently do not own any issued patents. We have filed eleven provisional patent applications in the veterinary field, of which we control the filing, prosecution and maintenance; however, patents based on any patent applications we may submit may never be issued. We have 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, our patents, if issued, and the patents we have licensed may not adequately protect our intellectual property or prevent others from designing around their claims. If we cannot obtain issued patents or the patents we have licensed are not maintained or their scope is significantly narrowed, our 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 our patent applications and the enforcement or defense of any patents that issue, all of which could harm our business and financial condition.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our 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 we or our licensors fail to maintain the patents and patent applications covering prescription drug product candidates and non-prescription products, our competitors might be able to enter the market, which would harm our business.

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

Our 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 we are unaware that might be infringed by one of our current or future prescription drug product candidates or non-prescription products. Moreover, it is also possible that patents may exist that we are aware of, but that we do not believe are relevant to our current or future prescription drug product candidates or non-prescription products, which could nevertheless be found to block our 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 we are unaware and which may later result in issued patents that may be infringed by our current or future prescription drug product candidates or non-prescription products. We cannot be certain that our 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 our technologies infringes upon these patents.

To the extent we become subject to future third-party claims against us or our collaborators, we could incur substantial expenses and, if any such claims are successful, we could be liable to pay substantial damages, including treble damages and attorney's fees if we or our collaborators are found to be willfully infringing a third party's patents. If a patent infringement suit were brought against us or our collaborators, we 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 we are 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 our business and operations. As a result of or in order to avoid potential patent infringement claims, we or our collaborators may be compelled to seek a license from a third party for which we 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 we or our collaborators were able to obtain such a license, the rights may be nonexclusive, which could allow our competitors access to the same intellectual property. Any of these events could harm our 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 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 our future patents, if any, and to patents we have in licensed. In addition to possible infringement claims against us, we 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 our 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 we have rights, we 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, we cannot be certain that we were the first to either file patent applications on or invent any of the inventions claimed in our 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. We may also become involved in opposition or similar proceedings in patent offices in other jurisdictions regarding our intellectual property rights with respect to our 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, our future patent rights, if any, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights.

Our 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 we have 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 our targeted indications or uses for which we 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.

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

We intend 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 our current prescription drug product candidates and non-prescription products and our development programs.

If the breadth or strength of protection provided by any patents, patent applications or future patents we may own, license, or pursue with respect to any of our current or future product candidates or products is threatened, it could threaten our ability to commercialize any of our current or future product candidates or products. Further, if we encounter delays in our development efforts, the period of time during which we could market any of our current or future product candidates or products under any patent protection we obtain 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 our 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, our competitors may take advantage of our investment in development and trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case.

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

If we are unable to prevent disclosure of our trade secrets or other confidential information to third parties, our competitive position may be impaired.

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

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

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

Competitors may infringe upon any patents that may issue to us, or any patents that we may license. To counter infringement or unauthorized use of any patents we may obtain, we may be required to file infringement claims or request that our licensor file an infringement claim, which can be expensive and

time-consuming to litigate. In addition, if we or one of our future collaborators were to initiate legal proceedings against a third party to enforce a patent covering our current product candidates, or one of our 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, we would lose at least part, and perhaps all, of any future patent protection on our current or future product candidates. Such a loss of patent protection could harm our business. We cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. For the patents and patent applications that we have licensed, we 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 our 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 our 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 our common stock. Finally, we may not be able to prevent, alone or with the support of our licensors, misappropriation of our 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 our ability to protect our products.

As is the case with other animal health product companies, our 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 our 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 our ability to obtain new patents or to enforce patents that we have licensed or that we might obtain in the future.

We may not be able to protect our intellectual property rights throughout the world, which could impair our 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 our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we may obtain patent protection, but where patent enforcement is not as strong as that in the United States. These products may

compete with our products in jurisdictions where we do 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 us to stop the infringement of our future patents, if any, or patents we have in licensed, or marketing of competing products in violation of our 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, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. Proceedings to enforce our future patent rights, if any, in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

Our business could be harmed if we fail to obtain certain registered trademarks in the United States or in other countries.

In October 2014, our trademark applications for Canalevia and Neonorm were approved for publication. Although we have filed a trademark application for our company name and our logo in the United States, our applications have not been granted and the corresponding marks have not been registered in the United States. We have not filed for these or other trademarks in any other countries. During trademark registration proceedings, we may receive rejections of our trademark applications. If so, we will have an opportunity to respond, but we 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 our trademark applications or any registered trademarks, our trademarks may not survive such proceedings. Moreover, any name we propose to use with our prescription drug product candidates in the United States, including Canalevia, must be approved by the FDA, regardless of whether we have 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 our proposed proprietary product names, we 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.

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

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

Risks Related to Government Regulation

Even if we receive any required regulatory approvals for our current or future prescription drug product candidates and non-prescription products, we 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 our current or future prescription drug product candidates, or if necessary, our non-prescription products, the manufacturing processes, 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 include, but are not limited to, submissions of safety and other post-marketing information and reports, establishment registration, and product listing, as well as continued compliance with cGMP, GLP and GCP for any studies that we conduct post-approval. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our contract manufacturers or manufacturing processes, or failure to comply with regulatory requirements, must be reported in many instances 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;
- 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 us or our 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 our product candidates or require certain changes to the labeling or additional clinical work concerning safety and efficacy of the product candidates. We 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 we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability, which would harm our business. In addition, failure to comply with these regulatory requirements could result in significant penalties.

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

The FDA issuing protocol concurrences for our pivotal studies does not guarantee ultimate approval of our NADA.

We intend to seek protocol concurrences with the FDA for the pivotal trial of Canalevia that we plan to conduct for general watery diarrhea in dogs and for future pivotal trials in other indications. A pivotal study protocol is submitted to the FDA voluntarily 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 we 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 our current or future prescription drug product candidates or non-prescription products may cause or contribute to adverse medical events that we would be required to report to regulatory authorities and, if we fail to do so, we could be subject to sanctions that would harm our business.

If we are successful in commercializing any of our current or future prescription drug product candidates or non-prescription products, at least certain regulatory authorities will require that we report certain information about adverse medical events if those products may have caused or contributed to those adverse events. The timing of our obligation to report would be triggered by the date we become aware of the adverse event as well as the nature of the event. We may fail to report adverse events we become aware of within the prescribed timeframe. We may also fail to appreciate that we have become aware of a reportable adverse event, especially if it is not reported to us as an adverse event or if it is an adverse event that is unexpected or removed in time from the use of our products. If we fail to comply with our reporting obligations, the regulatory authorities could take action including, but not limited to, criminal prosecution, seizure of our products or 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 us to obtain regulatory clearance or approval of any of our current or future product candidates and to produce, market, and distribute our 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 we intend 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 and other regulations and guidance are often revised or reinterpreted by the FDA and such other regulators in ways that may significantly affect our business and our 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 our current or future products and product candidates. We cannot determine what effect changes in regulations, statutes, legal interpretation or policies, when and if promulgated, enacted or adopted may have on our business in the future. Such changes could, among other things, require:

- changes to manufacturing methods;
- new requirements related to approval to enter the market;
- recall, replacement, or discontinuance of certain products; and
- additional record keeping.

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

We do not believe that our non-prescription products are subject to regulation by regulatory agencies in the United States, but there is a risk that regulatory bodies may disagree with our 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 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 does not believe that the Dietary Supplement and Health Education Act, or DSHEA, applies to animal health supplement products, such as our 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, 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. Our non-prescription products are not added to food, are not ingredients in food nor are they added to any animal's drinking water. Therefore, our 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 our 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. We do not believe that our 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. Our 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. Our non-prescription products are intended to support a healthy gut and normalize stool formation in animals that often contract and suffer from scours, a symptom of which is dehydration. A healthy well-hydrated gut allows them to better fight the scours as they do not also have to struggle with dehydration. Our non-prescription products are not being delivered to treat the disease of scours but rather to provide a more well-hydrated gut and normalize stool formation to better enable the animal to manage the scours. Additionally, because a previously marketed human formulation of the botanical extract in our non-prescription products was regulated as a human dietary supplement subject to the DSHEA (and not regulated as a drug by the FDA), we do not believe that the FDA would regulate the animal formulation used in our non-prescription products in a different manner. We do not believe that our 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, we may be subject to unknown regulations thereby inhibiting our ability to launch or to continue marketing our 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. We have not discussed with the FDA our belief that the FDA currently does not exercise jurisdiction over our non-prescription products. Should the FDA assert regulatory authority over our non-prescription products, we 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. We do not believe we are 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 our non-prescription products, we could be required to seek regulatory approval for our non-prescription products, which would result in additional expense and could delay or prevent the commercialization of these products.

Risks Related to this Offering and Our Common Stock

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

If a market for our common stock develops following this offering, the trading price of our common stock could be subject to wide fluctuations in response to various factors, some of which are beyond our control. These factors include those discussed previously in this "Risk Factors" section of this prospectus and others, such as:

- delays in the commercialization of Neonorm, Canalevia or our other current or future prescription drug product candidates and non-prescription products;
- any delays in, or suspension or failure of, our current and future studies;
- announcements of regulatory approval or disapproval of any of our current or future product candidates or of regulatory actions affecting us or our industry;
- manufacturing and supply issues that affect product candidate or product supply for our studies or commercialization efforts;
- quarterly variations in our results of operations or those of our competitors;
- changes in our earnings estimates or recommendations by securities analysts;
- the payment of licensing fees or royalties in shares of our common stock;
- announcements by us or our 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 our intellectual property rights or those of our principal collaborators;
- commencement of litigation involving us or our competitors;
- any major changes in our 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 our 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 our competitors; and
- general economic conditions in the United States and abroad.

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

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

Prior to this offering, there has been no public market for shares of our common stock. We and the representative of the underwriters determined the initial public offering price of our common stock by arm's-length negotiations, and the initial public offering price does not necessarily reflect the price at which investors in the market will be willing to buy and sell our shares following this offering. If no active trading market for our common stock develops or is sustained following this offering, 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 our ability to raise capital by selling securities in the future, or impair our ability to license or acquire other product candidates, businesses or technologies using our shares as consideration.

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment.

The initial public offering price of our common stock is substantially higher than the pro forma net tangible book value per share of our common stock before giving effect to this offering. Accordingly, if you purchase our common stock in this offering, you will incur immediate dilution of approximately $4.86 per share, representing the difference between the initial public offering price of $7.00 per share and our pro forma as adjusted net tangible book value per share as of December 31, 2014. In addition, following this offering, purchasers participating in this offering will have contributed approximately 70.1% of the total gross consideration paid by stockholders to us to purchase shares of our common stock through December 31, 2014, but will own only approximately 37.5% of the shares of common stock outstanding immediately after this offering. Furthermore, if the underwriters exercise their option to purchase additional shares of our common stock or our outstanding stock options are exercised, you will experience further dilution. For a further description of the dilution that you will experience immediately after this offering, see the section in this prospectus titled "Dilution."

If securities or industry analysts do not publish research or reports about our company, or if they issue an adverse or misleading opinions regarding us or our stock, our stock price and trading volume could decline.

We do not currently have research coverage by securities and industry analysts, and if no significant coverage is initiated or maintained following this offering, the market price for our stock may be adversely affected. Our stock price also may decline if any analyst who covers us issues an adverse or erroneous opinion regarding us, our business model, our intellectual property or our stock performance, or if our animal studies and operating results fail to meet analysts' expectations. If one or more analysts cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline and possibly adversely affect our ability to engage in future financings.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the expiration or termination of the lock-up and other legal restrictions on resale discussed in this prospectus, the trading price of our common stock could decline. Based upon the

number of shares outstanding as of December 31, 2014, and an initial public offering price of $7.00 per share, upon the closing of this offering, we will have outstanding a total of 8,115,282 shares of common stock. Of these shares, 3,150,000 shares, plus any shares sold upon exercise of the underwriters' option to purchase additional shares of our common stock, will be freely tradable in the public market immediately following this offering, unless held by our "affiliates," as that term is defined in Rule 144 under the Securities Act. Following this offering, holders of outstanding convertible notes, warrants, or options may also convert or exercise their securities, and outstanding RSUs may vest, all of which will result in additional shares of our common stock being issued, which ultimately may be sold into the market. Further, we may pay licensing fees or royalties due under our license agreement in shares of our common stock, and reach agreement with other creditors to pay fees due in shares of our common stock, all of which could lead to additional shares being available for resale.

The lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus. After the lock-up agreements expire, up to an additional 5,259,923 shares of common stock outstanding immediately after the offering will be eligible for sale in the public market, 4,517,123 of which shares are held by directors, executive officers and other affiliates and will be subject to vesting schedules or volume limitations under Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. The representative of the underwriters may, in its sole discretion, permit our officers, directors and other stockholders who are subject to lock-up agreements to sell shares even prior to the expiration of the lock-up agreements. In addition, shares of common stock that are subject to outstanding options under our 2013 Equity Incentive Plan will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 under the Securities Act. The sale or possible sale of these additional shares may adversely affect the trading price of our common stock.

We will have broad discretion to use the net proceeds from this offering, and may use them in ways that do not enhance our operating results or the market price of our common stock.

Our management will have broad discretion regarding the use of the net proceeds from this offering, and we could spend the net proceeds in ways our stockholders may not agree with or that do not yield a favorable return, if at all. We intend to use the net proceeds from this offering for the research and development of our prescription drug and non-prescription products and product candidates, manufacturing, marketing, distribution and commercialization of any products, repayment of indebtedness and other general corporate and working capital purposes. We may also use a portion of the net proceeds to acquire additional product candidates or complementary assets or businesses; however, we currently have no agreements or commitments to complete any such transaction. Our use of these proceeds may differ substantially from our current plans. If we do not invest or apply the net proceeds from this offering in ways that improve our operating results or our prospects, our stock price could decline.

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

Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the closing of this offering will contain provisions that could delay or prevent changes in control or changes in our management without the consent of our board of directors. We expect 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 our 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 our 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 our board of directors;

- the ability of our 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 our common stockholders or be used to deter a possible acquisition of our company;

- the ability of our board of directors to alter our 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 our bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;

- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our 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 our 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 our 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 us.

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

We are 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.

Our 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 our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or other employees.

Our amended and restated bylaws that will be in effect upon the closing of this offering provide that, unless we consent 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 our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee to us or our 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 our certificate of incorporation or bylaws. Any person purchasing or otherwise acquiring any interest in any shares of our capital stock shall be deemed to have notice of and to have consented to this provision of our amended and restated bylaws. This choice-of-forum provision may limit our stockholders' ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits. Alternatively, if a court were to find this provision of our amended and restated bylaws inapplicable or unenforceable with respect to one or more of the specified types of actions or proceedings,

we may incur additional costs associated with resolving such matters in other jurisdictions, which could harm our business and financial condition.

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

As described in the section titled "Dividend Policy" in this prospectus, we currently intend to invest our future earnings, if any, to fund our growth and not to pay any cash dividends on our common stock. Because we do not intend to pay dividends, your ability to receive a return on your investment will depend on any future appreciation in the market price of our common stock. We cannot be certain that our common stock will appreciate in price.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Upon the closing of this offering, based on shares outstanding as of December 31, 2014 and after taking into account the automatic conversion of outstanding notes that will occur in connection with this offering, our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates will beneficially own in the aggregate approximately 55.2% of our outstanding shares of common stock. As a result of their stock ownership, these stockholders may have the ability to influence our management and policies, and will be able to significantly affect the outcome of matters requiring stockholder approval such as elections of directors, amendments of our 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 our common stock that you may feel are in your best interest as one of our stockholders.

As a newly public company, we will incur significant additional costs, and our management will be required to devote substantial management time and attention to our public reporting obligations.

As a privately-held company, we have not been 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, we will incur 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 U.S. Securities and Exchange Commission, or the SEC, and The NASDAQ Capital Market, may result in an increase in our costs and the time that our board of directors and management must devote to our compliance with these rules and regulations. We expect these rules and regulations to substantially increase our legal and financial compliance costs and to divert management time and attention from our product development and other business activities.

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

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

We are an "emerging growth company" and we cannot be certain if the reduced disclosure requirements applicable to "emerging growth companies" will make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and we 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 we are an "emerging growth company" (i) we will not be required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act, (ii) we will be subject to reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and (iii) we 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 we have irrevocably elected not to avail ourselves of this exemption and, therefore, we 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 our common stock less attractive if we rely on the exemptions and relief granted by the JOBS Act. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may decline and/or become more volatile.

We 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 this offering), although we may cease to be an "emerging growth company" earlier under certain circumstances, including (i) if the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of any June 30, in which case we would cease to be an "emerging growth company" as of December 31 of such year, (ii) if our gross revenue exceeds $1.0 billion in any fiscal year or (iii) if we issue more than $1.0 billion of non-convertible debt over a three-year period.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, prospective products, product approvals, research and development costs, timing of receipt of clinical trial, field study and other study data, and likelihood of success, commercialization plans and timing, other plans and objectives of management for future operations, and future results of current and anticipated products are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "aim," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions. The forward-looking statements in this prospectus are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described under the sections in this prospectus titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this prospectus. Forward-looking statements are subject to inherent risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in a dynamic industry and economy. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties that we may face. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

INDUSTRY DATA

Unless otherwise indicated, information contained in this prospectus concerning our industry and the markets in which we operate, including our general expectations and market position, market opportunity and market share, is based on information from our own management estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge, which we believe to be reasonable. In addition, assumptions and estimates of our and our industry's future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in "Risk Factors." These and other factors could cause our future performance to differ materially from our assumptions and estimates. See "Special Note Regarding Forward-Looking Statements."

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of 3,150,000 shares of common stock in this offering will be approximately $17.2 million, after deducting underwriting discounts and estimated offering expenses payable by us. If the underwriters exercise their option to purchase additional shares from us in full, we estimate that the net proceeds from this offering will be approximately $20.3 million, after deducting underwriting discounts and estimated offering expenses payable by us.

A $1.00 increase (decrease) in the initial public offering price of $7.00 per share would increase (decrease) the net proceeds from this offering by approximately $2.9 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and estimated offering expenses payable by us. An increase (decrease) by 1,000,000 shares in the number of shares offered by us would increase (decrease) the net proceeds to us from this offering by approximately $6.5 million, assuming that the initial public offering price remains the same, and after deducting underwriting discounts. We do not expect that a change in the initial public offering price or the number of shares by these amounts would have a material effect on our anticipated uses of the net proceeds from this offering, although it may accelerate the time at which we will need to seek additional capital.

We anticipate that we will use the net proceeds from this offering as follows:

- approximately $2.4 million for clinical studies and regulatory approval costs related to Canalevia for CID ($0.4 million) and general watery diarrhea ($2.0 million) in dogs;
- approximately $2.1 million for clinical studies and regulatory approval costs related to the other prescription drug products in our pipeline, namely species-specific formulations of crofelemer for general watery diarrhea in cats ($0.4 million), acute colitis in horses ($0.7 million), and gastric and colonic ulcers in horses and proof-of-concept studies for NP-500 ($1.0 million);
- approximately $3.5 million for studies and activities inside and outside the United States and for commercial activities related to the launch of Canalevia, our lead prescription drug product candidate for the treatment of various forms of watery diarrhea in dogs and for the continued commercialization efforts related to Neonorm both domestically and internationally;
- approximately $1.0 million for studies and field trials relating to Neonorm Calf and additional non-prescription formulations of Neonorm for other animal species including horse foals and adult horses;
- approximately $2.2 million for costs associated with developing species-specific formulations of our products;
- approximately $2.1 million for establishing third-party manufacturing capability, including the technology transfer at Indena S.p.A. pursuant to our memorandums of understanding;
- Approximately $1.3 million to repay the notes with an aggregate principal amount of $1.0 million that we borrowed in December 2014 pursuant to our Standby Bridge Financing Agreement. These notes had 10% original issue discount, have a stated interest rate of 12%, and provide for payment of 118% of the aggregate amount of principal plus interest, along with any other payments due, at maturity. We used the funds from these notes for working capital. See "Underwriting—Certain Relationships"; and
- the remaining funds will be utilized for working capital and general corporate purposes.

A portion of the proceeds of this offering may also be used for repayment of up to $900,000 aggregate principal amount of convertible promissory notes that is currently outstanding if the holders thereof demand payment thereof, which they have the right to do at any time within 30 days following completion of this offering. In addition, we also have the right to prepay these notes at any time within 30 days

following completion of this offering, although we do not currently have any intention to do so. These notes bear interest at 12% per annum, were issued pursuant to a convertible note and warrant purchase agreement dated December 23, 2014, and the proceeds from their sale was used for working capital purposes.

These expected uses of the net proceeds from this offering represents our intentions based upon our current financial condition, results of operations, business plans and conditions. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

We may also use a portion of the net proceeds from this offering for the acquisition of, or investment in, complementary business, products or technologies, although we have no present commitments or agreements for any specific acquisitions or investments. Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment grade, interest bearing instruments and U.S. government securities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We intend to retain future earnings, if any, to finance the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to dividend policy will be made at the discretion of our board of directors after considering our financial condition, results of operations, capital requirements, business prospects and other factors the board of directors deems relevant, and subject to the restrictions contained in any future financing instruments.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of December 31, 2014, as follows:

- on an actual basis;
- on a pro forma basis to give effect to (i) the conversion of all outstanding shares of Series A preferred stock into 2,010,596 shares of common stock upon the closing of this offering; (ii) the issuance of 374,997 shares of common stock upon the conversion of convertible promissory notes in the aggregate principal amount of $2,100,000 upon the closing of this offering at a conversion price equal to $5.60 per share, and which shares will be unregistered; (iii) the issuance of $1,250,000 aggregate principal amount of convertible promissory notes after December 31, 2014 ($1,000,000 of which will convert into shares of common stock upon the closing of this offering); (iv) the modification in March 2015 of $650,000 aggregate principal amount of convertible promissory notes issued in December 2014 to automatically convert into shares of common stock upon the closing of this offering at a conversion price equal to $5.60 per share; and (v) the filing and effectiveness of our amended and restated certificate of incorporation upon the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to (i) the sale of 3,150,000 shares of common stock in this offering at the initial public offering price of $7.00 per share, after deducting underwriting discounts and estimated offering expenses payable by us and (ii) the repayment of our $1.0 million standby bridge facility.

You should read this information in conjunction with our financial statements and related notes appearing elsewhere in this prospectus and the sections in this prospectus titled "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	As of December 31, 2014		
	Actual	Pro Forma (unaudited)	Pro Forma As Adjusted(1)
Cash and cash equivalents	$ 845,192	$ 2,095,192	$ 18,301,692
Convertible notes payable	$ 424,674	$ 250,000	$ 250,000
Notes payable	$ 478,709	$ 478,709	$ —
Series A redeemable convertible preferred stock, par value $0.0001 per share: 3,017,488 shares authorized, 3,015,902 shares issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	7,304,914	—	—
Stockholders' equity (deficit):			
Preferred stock, par value $0.0001 per share; no shares authorized, issued and outstanding, actual; 10,000,000 shares authorized, no shares issued and outstanding pro forma and pro forma as adjusted	—	—	—
Common stock, par value $0.0001 per share: 10,000,000 shares authorized, 2,874,330 shares issued and outstanding, actual; 50,000,000 shares authorized, 5,259,923 shares issued and outstanding, pro forma; 8,409,923 shares issued and outstanding, pro forma as adjusted	288	525	840
Additional paid-in capital	1,175,242	12,181,808	29,387,993
Accumulated deficit	(9,410,778)	(11,086,104)	(11,607,395)
Total stockholders' equity (deficit)	(8,235,248)	1,096,229	17,781,438
Total capitalization	$ (26,951)	$ 1,824,938	$ 18,031,438

(1) A $1.00 increase (decrease) in the initial public offering price of $7.00 per share would increase (decrease) each of cash and cash equivalents, additional paid-in capital, total stockholders' equity (deficit) and total capitalization

by approximately $2.9 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and estimated offering expenses payable by us. An increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) cash and cash equivalents, additional paid-in capital, total stockholders' equity (deficit) and total capitalization by approximately $6.5 million, assuming the initial public offering price remains the same, and after deducting underwriting discounts. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing.

The outstanding share information in the table above is based on 5,259,923 shares of common stock outstanding as of December 31, 2014, and excludes:

- 207,664 shares of common stock issuable upon exercise of outstanding warrants as of December 31, 2014 at an exercise price of $2.5281 per share; and
- 16,666 shares of common stock issuable upon exercise of an outstanding warrant as of December 31, 2014 with an exercise price of $6.30 per share;
- 269,938 shares of our common stock issuable upon exercise of outstanding warrants as of December 31, 2014 with an exercise price of $5.60 per share;
- 111,605 shares of common stock issuable upon exercise of outstanding warrants issued after December 31, 2014 with an exercise price of $5.60 per share;
- 659,554 shares issuable upon exercise of outstanding options as of December 31, 2014 with a weighted-average exercise price of $2.67 per share;
- 68,902 shares issuable upon vesting of outstanding restricted stock unit awards, or RSUs, as of December 31, 2014;
- 1,484 shares issuable upon vesting of outstanding RSUs issued after December 31, 2014;
- 203,030 shares issuable upon exercise of stock options, which were authorized after December 31, 2014, and which will be granted effective upon this offering with an exercise price equal to the initial public offering price;
- up to 44,642 shares of common stock issuable upon conversion of outstanding convertible promissory notes in the aggregate principle amount of $250,000 issued after December 31, 2014;
- 25,197 shares of common stock reserved for future issuance under our 2013 Equity Incentive Plan; and after taking into account the grant of an equity awards for an aggregate of 204,514 shares under our 2013 Equity Incentive Plan after December 31, 2014; and
- 333,333 shares of common stock reserved for future issuance under our 2014 Stock Incentive Plan, which will become effective in connection with this offering, as well as any automatic increases in the shares of common stock reserved for future issuance under the 2014 Stock Incentive Plan.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

As of December 31, 2014, our historical net tangible book value was $(8.2) million, or $(2.87) per share of common stock. Our historical net tangible book value per share represents the amount of our total tangible assets less total liabilities divided by the number of shares of common stock outstanding as of December 31, 2014.

Our pro forma net tangible book value as of December 31, 2014 was $1.3 million or $0.26 per share of common stock, after giving effect to (i) the conversion of all outstanding shares of Series A preferred stock into 2,010,596 shares of common stock upon the closing of this offering; (ii) the issuance of 374,997 shares of common stock upon the conversion of convertible promissory notes in the aggregate principal amount of $2,100,000 upon the closing of this offering at a conversion price equal to $5.60 per share, and which shares will be unregistered; (iii) the issuance of $1,250,000 aggregate principal amount of convertible promissory notes after December 31, 2014 ($1,000,000 of which will convert into shares of common stock upon the closing of this offering); (iv) the modification in March 2015 of $650,000 aggregate principal amount of convertible promissory notes issued in December 2014 to automatically convert into shares of common stock upon the closing of this offering at a conversion price equal to $5.60 per share; and (v) the filing and effectiveness of our amended and restated certificate of incorporation upon the closing of this offering.

After giving further effect to (i) the sale of the 3,150,000 shares of common stock in this offering at the initial public offering price of $7.00 per share, after deducting underwriting discounts and estimated offering expenses payable by us and (ii) the repayment of our $1.0 million standby bridge facility, our pro forma as adjusted net tangible book value as of December 31, 2014 would have been approximately $18.0 million, or $2.14 per share. This amount represents an immediate increase in pro forma net tangible book value of $1.88 per share to our existing stockholders, and an immediate dilution in pro forma net tangible book value of approximately $4.86 per share to new investors purchasing shares of common stock in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share paid by new investors. The following table illustrates this dilution:

Initial public offering price per share		$ 7.00
Historical net tangible book value per share as of December 31, 2014	$ (2.87)	
Increase attributable to conversion of all outstanding shares of Series A preferred stock and $2,100,000 of convertible promissory notes	3.13	
Pro forma net tangible book value per share as of December 31, 2014	0.26	
Increase in net tangible book value per share attributable to new investors	1.88	
Pro forma as adjusted net tangible book value per share after this offering		2.14
Dilution per share to new investors		$ 4.86

If the underwriters exercise their option to purchase additional shares in full, the pro forma as adjusted net tangible book value will increase to $2.38 per share, representing an immediate dilution of $4.62 per share to new investors.

A $1.00 increase (decrease) in the initial public offering price of $7.00 per share would increase (decrease) our pro forma as adjusted net tangible book value per share after this offering by $0.35 per

share and the dilution to new investors by $0.65 per share, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and estimated offering expenses payable by us. An increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) the pro forma as adjusted net tangible book value by $0.47 and $0.59 per share, respectively, and the dilution to new investors by $0.47 and $0.59 per share, respectively, assuming the initial public offering price remains the same and after deducting underwriting discounts. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing.

The following table summarizes, on a pro forma as adjusted basis as of December 31, 2014, the differences between the number of shares of common stock purchased from us, the total consideration and the average price per share paid by existing stockholders and by investors participating in this offering, before deducting underwriting discounts and estimated offering expenses payable by us, at an initial public offering price of $7.00 per share.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	5,259,923	62.5%	$ 9,402,738	29.9%	$ 1.79
New investors	3,150,000	37.5%	22,050,000	70.1%	7.00
Total	8,409,923	100%	$ 31,452,738	100%	

The number of shares of common stock to be outstanding after this offering excludes:

- 207,664 shares of common stock issuable upon exercise of outstanding warrants as of December 31, 2014 with an exercise price of $2.5281 per share; and
- 16,666 shares of common stock issuable upon exercise of an outstanding warrant as of December 31, 2014 with an exercise price of $6.30 per share;
- 269,938 shares of our common stock issuable upon exercise of outstanding warrants as of December 31, 2014 with an exercise price of $5.60 per share;
- 111,605 shares of common stock issuable upon exercise of outstanding warrants issued after December 31, 2014 with an exercise price of $5.60 per share;
- 659,554 shares issuable upon exercise of outstanding options as of December 31, 2014 with a weighted-average exercise price of $2.67 per share;
- 68,902 shares issuable upon vesting of outstanding RSUs as of December 31, 2014;
- 1,484 shares issuable upon vesting of outstanding RSUs issued after December 31, 2014;
- 203,030 shares issuable upon exercise of stock options, which were authorized after December 31, 2014, and which will be granted effective upon this offering with an exercise price equal to the initial public offering price;
- up to 44,642 shares of common stock issuable upon conversion of outstanding convertible promissory notes in the aggregate principle amount of $250,000 issued after December 31, 2014;
- 25,197 shares of common stock reserved for future issuance under our 2013 Equity Incentive Plan; and after taking into account the grant of an equity awards for an aggregate of 204,514 shares under our 2013 Equity Incentive Plan after December 31, 2014; and
- 333,333 shares of common stock reserved for future issuance under our 2014 Stock Incentive Plan, which will become effective in connection with this offering, as well as any automatic increases in the shares of common stock reserved for future issuance under the 2014 Stock Incentive Plan.

To the extent any of these outstanding options or warrants are exercised or RSUs vest, there will be further dilution to new investors. If all of such outstanding options or warrants had been exercised or RSUs vested as of December 31, 2014, the pro forma as adjusted net tangible book value after this offering would be $2.28 per share, and total dilution to new investors would be $4.72 per share.

If the underwriters exercise their option to purchase additional shares of common stock in full:

- the percentage of shares of common stock held by existing stockholders will decrease to approximately 59.2% of the total number of shares of common stock outstanding after this offering; and
- the number of shares held by new investors will increase to 3,622,500, or approximately 40.8% of the total number of shares of common stock outstanding after this offering.

SELECTED FINANCIAL DATA

You should read the following selected financial data together with our financial statements and related notes appearing elsewhere in this prospectus and the section in this prospectus titled "Management's Discussion and Analysis of Financial Condition and Results of Operations." Napo formed our company to develop and commercialize animal health products. As of December 31, 2013, we were a wholly-owned subsidiary of Napo, and as of December 31, 2014, we are a majority-owned subsidiary of Napo.

The following tables set forth our selected statements of comprehensive loss data since inception in June 2013 and our selected balance sheet data as of December 31, 2014. We are a development stage company. Data for the period from June 6, 2013 (inception) through and as of December 31, 2013 and 2014 is derived from our audited financial statements included elsewhere in this prospectus. The historical results are not necessarily indicative of the results to be expected for any future periods.

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
Statements of Comprehensive Loss Data:		
Operating expenses:		
General and administrative expense	$ 458,473	$ 4,095,324
Research and development expense	324,479	4,220,338
Total operating expenses	782,952	8,315,662
Loss from operations	(782,952)	(8,315,662)
Interest expense, net	(18,251)	(345,336)
Change in fair value of warrants	—	51,423
Net loss and comprehensive loss	$ (801,203)	$ (8,609,575)
Accretion of redeemable convertible preferred stock	—	(646,673)
Net loss attributable to common stockholders	$ (801,203)	$ (9,256,248)
Net loss per share attributable to common stockholders, basic and diluted(1)	$ (0.30)	$ (3.24)
Weighted-average common shares outstanding, basic and diluted(1)	2,666,666	2,854,417
Pro forma net loss per share, basic and diluted(1)	$ (0.30)	$ (2.02)
Pro forma weighted-average number of common shares(1)	2,666,666	4,592,283

(1) See Notes 2 and 13 to our financial statements for a description of the method used to compute basic and diluted net loss per share and pro forma net loss per share.

	As of December 31, 2014
Balance Sheet Data:	
Cash and cash equivalents	$ 845,192
Total assets	4,506,630
Convertible notes payable	424,674
Notes payable	478,709
Warrant liability	601,889
Total liabilities	5,436,964
Redeemable convertible preferred stock	7,304,914
Total stockholders' (deficit)	(8,235,248)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should review the "Risk Factors" section of this prospectus for a discussion of important factors that could cause our actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are an animal health company focused on developing and commercializing first-in-class gastrointestinal products for companion and production animals. Canalevia is our lead prescription drug product candidate for the treatment of various forms of watery diarrhea in dogs. We achieved statistically significant results in a canine proof-of-concept study completed in February 2015, supporting the conclusion that Canalevia treatment is superior to placebo, with 91% of the Canalevia-treated dogs achieving a formed stool during the study versus 50% of the placebo-treated dogs. We also initiated filing of a rolling new animal drug application, or NADA, with the U.S. Food and Drug Administration, or FDA, for Canalevia for chemotherapy-induced diarrhea, or CID, in dogs, at the end of 2014. Canalevia is a canine-specific formulation of crofelemer, an active pharmaceutical ingredient isolated and purified from the *Croton lechleri* tree. A human-specific formulation of crofelemer, 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 our management team developed crofelemer, including while at Napo Pharmaceuticals, Inc., or Napo. Neonorm is our lead non-prescription product to improve gut health and normalize stool formation in animals suffering from watery diarrhea, or scours. We launched Neonorm in the United States at the end of 2014 for preweaned dairy calves under the brand name Neonorm Calf and expect to launch additional formulations of Neonorm for other animal species in 2015. We have already shipped approximately $450,000 of Neonorm Calf to distributors. Neonorm is a botanical extract also derived from the *Croton lechleri* tree. Canalevia and Neonorm are distinct products that are formulated to address specific species and market channels. We have 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.

Since inception, we have been primarily focused on designing protocols for studies of Canalevia to treat multiple preselected and distinct types of watery diarrhea in dogs and for Neonorm to improve gut health and normalize stool formation in preweaned dairy calves suffering from scours. We have also conducted a clinical study of Neonorm in preweaned dairy calves with scours. A portion of our activities has also been focused on other efforts associated with being a newly formed company, including securing necessary intellectual property, recruiting management and key employees and initial financing activities.

In January 2014, we entered into the Napo License Agreement, pursuant to which we 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. Under the Napo License Agreement, Napo also assigned to us equipment, inventory and granted us a right to cross-reference any regulatory submissions or drug-matter files for which Napo has rights and access.

In consideration for the license from Napo, we are obligated to pay a one-time non-refundable license fee of $1.75 million, less an option fee of $100,000 we paid in July 2013. In December 2014, we paid Napo

an additional $25,000, 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 our 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

For products derived from *Croton lechleri*, we 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, 1% of 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. We may pay any royalty payments in our common stock at our option. Following the closing of this offering, we will not owe Napo any royalties on sales of non-*Croton lechleri* products.

Financial Operations Overview

We were incorporated in June 2013 in Delaware. Napo formed our company to develop and commercialize animal health products. Prior to our incorporation, the only activities of Napo related to animal health were limited to the retention of consultants to evaluate potential strategic alternatives. As of December 31, 2013, we were a wholly-owned subsidiary of Napo, and as of December 31, 2014, we are a majority-owned subsidiary of Napo. Upon the closing of this offering, we will no longer be majority-owned by Napo.

We have presented our financial statements on a standalone basis without predecessor or carve-out financial information because we do not have a "predecessor" within the meaning of Rule 405 of Regulation C under the Securities Act. We did not succeed to a major portion of the business or assets of Napo, nor a separately identifiable line of business of Napo. Prior to our formation, Napo's operations did not include an animal health business and we were formed for the purpose of developing and commercializing products in the animal health field. Napo's business was focused on the development of human-specific formulations of its product, as well as licensing activities related to its intellectual property. Since early 2011, Napo's business activities have been limited to activities related to the licensing of its intellectual property, which we did not acquire or succeed to, and there were no predecessor operations of the animal health business in Napo prior to our formation. For these reasons, we did not succeed to substantially all of the business of Napo nor a separately identifiable line of business of Napo.

In July 2013, we entered into an employee leasing and overhead allocation agreement with Napo, or the Service Agreement. The term of the Service Agreement was from July 1, 2013 through February 28, 2014. Pursuant to the Service Agreement, Napo provided us the services of certain Napo employees, and on March 1, 2014, these employees joined our company. In addition, we also agreed to pay Napo for a portion of its overhead costs during the term of the agreement. We agreed to pay Napo for the months from July 2013 through February 2014 as follows: (1) for the period from July 2013 through November 2013, in 2,666,666 shares of common stock and (2) for the period from December 2013 through February 2014, $71,811 per month (consisting of $65,811 for employee services and $6,000 for overhead costs) in cash.

We have not generated any material revenue to date and expect to continue to incur significant research and development and other expenses. Our net loss attributable to common stockholders for the year ended December 31, 2014 was $9,256,248. As of December 31, 2014, we had a total stockholders' deficit of $8,235,248. We expect to continue to incur losses for the foreseeable future as we expand our product development activities, seek necessary approvals for our product candidates, conduct species-specific formulation studies for our non-prescription products, establish API manufacturing capabilities and begin commercialization activities.

Operating Expenses

The majority of our operating expenses to date have been for research and development activities related to Canalevia and Neonorm and for costs associated with our formation, including legal, recruiting, travel and financing activities. During 2013, we did not incur any stock-based compensation expense. For the year ended December 31, 2014, operating expenses includes $164,156 of stock-based compensation expense.

Research and Development Expense

Research and development costs are expensed as incurred. Research and development expense consists primarily of third-party consultant fees, expenses attributable to services received from Napo under the Service Agreement and expenses related to our clinical studies. Beginning January 1, 2014, research and development expense also includes personnel-related costs, including salaries and benefits, and other operational costs related to our research and development activities, including costs of studies, raw material acquisition costs, contract manufacturers and service providers, regulatory, professional and consulting fees, and travel costs.

We typically use our employee and infrastructure resources across multiple development programs. We track outsourced development costs by prescription drug product candidate and non-prescription product but do not allocate personnel or other internal costs related to development to specific programs or development compounds.

The timing and amount of our research and development expenses will depend largely upon the outcomes of current and future trials for our prescription drug product candidates as well as the related regulatory requirements, the outcomes of current and future species-specific formulation studies for our non-prescription products, manufacturing costs and any costs associated with the advancement of our line extension programs. We 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 our prescription drug and non-prescription products will depend on a variety of factors, including:

- the scope, rate of progress, and expense of our 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 our development activities.

We expect research and development expense to increase significantly as we add personnel, commence additional clinical studies and other activities to develop our prescription drug product candidates and non-prescription products.

General and Administrative Expense

General and administrative expense consists of personnel-related costs, including salaries and benefits, and also includes expenses attributable to services received from Napo under the Service Agreement, rent and other facilities costs and professional and consulting fees for legal, accounting, tax services and other general business services. During 2013, we did not incur any stock-based compensation expense. For the year ended December 31, 2014, general and administrative expense includes $106,701 of stock-based compensation expense.

We expect general and administrative expense to increase significantly as we incur operating costs related to being a public company, including building our corporate infrastructure.

Interest (Expense) Income, Net

Interest (expense) income, net consists primarily of interest expense related to our convertible promissory notes and standby bridge financing commitment. It also includes interest expense and the amortization of a beneficial conversion feature related to convertible promissory notes issued in June and December 2014.

Results of Operations

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
Operating expenses:		
General and administrative expense	$ 458,473	$ 4,095,324
Research and development expense	324,479	4,220,338
Total operating expenses	782,952	8,315,662
Loss from operations	(782,952)	(8,315,662)
Interest (expense), net	(18,251)	(345,336)
Change in fair value of warrants	—	51,423
Net loss and comprehensive loss	$ (801,203)	$ (8,609,575)

General and Administrative Expense

The following table presents the components of general and administrative expense for the periods indicated:

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
Personnel and related benefits	$ —	$ 1,566,288
Accounting fees	—	189,520
Third-party consulting fees and Napo service fees	391,493	660,674
Legal fees	4,780	414,664
Travel, other expenses	—	638,429
Stock-based compensation	—	93,360
Other	62,200	532,389
Total	$ 458,473	$ 4,095,324

General and administrative expense for 2013 primarily consists of third-party consulting fees and services provided by Napo personnel pursuant to the Service Agreement related to fundraising, corporate organization and administrative services, as well as Napo overhead allocation expense. Legal fees were related to general corporate activities. Other expenses included costs related to marketing studies, business development consultants and travel.

General and administrative expense for the year ended December 31, 2014 primarily consists of salaries and related benefits for employees, third-party consulting fees, legal and accounting fees, travel expenses, including hotel and airfare, and two months of services provided by Napo personnel pursuant to the Service Agreement, as well as Napo overhead allocation expense and legal costs related to intellectual property development and general corporate activities. In March 2014, upon the conclusion of the Service Agreement with Napo, four Napo employees joined us as our employees.

Research and Development Expense

The following table presents the components of research and development expense for the periods indicated:

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
Personnel and related benefits	$ —	$ 1,117,825
Third-party consulting and Napo service fees	136,274	174,985
Materials expense	—	1,400,160
Studies, formulation and assay costs	159,048	515,452
Travel, other expenses	—	343,768
Supply costs and contract manufacturing	—	459,905
Stock-based compensation	—	70,796
Other	29,157	137,447
Total	$ 324,479	$ 4,220,338

Research and development expense for 2013 includes expenses associated with services provided by Napo employees, raw material supply costs and manufacturing-related activities. We also retained third-party consultants in connection with our application for MUMS designation for Canalevia for CID in dogs,

and the development of a protocol for a study of Neonorm in preweaned dairy calves. Study and assay costs include costs of a study of Neonorm in preweaned dairy calves conducted at a veterinary school.

Research and development expense for the year ended December 31, 2014 primarily consists of materials for studies and pre-commercial manufacturing that were transferred to our company as part of the Napo License Agreement, and expensed. Research and development expenses also include payroll and related benefits for research and development personnel, the costs of a study of Neonorm in preweaned dairy calves, services provided by Napo personnel before they became employees of our company in March 2014, consultants, and manufacturing and raw material supply costs and related activities.

Liquidity and Capital Resources

Since inception, we have not generated any material revenue and we have funded our operations primarily through the issuance of equity securities and convertible promissory notes. We have incurred increasing losses and negative cash flow from operations, and as of December 31, 2014, we had an accumulated deficit of $9,410,778. We anticipate that we will continue to incur losses for at least the next two years due to expenses relating to:

- trials of our products and product candidates;
- toxicology studies for our product candidates;
- establishing contract manufacturing capabilities; and
- commercialization of one or more of our prescription drug product candidates, if approved, and commercialization of our non-prescription products.

As of December 31, 2014, we had cash and cash equivalents of $845,192. From June 2014 through December 2014, we issued convertible promissory notes in an aggregate principal amount of $1.1 million. In August 2014, we entered into a standby line of credit with an individual, who is an accredited investor, for up to $1.0 million. As of December 31, 2014, we had not made any drawdowns under this facility. In October 2014, as amended and restated in December 2014, we entered into a $1.0 million standby bridge loan. We also issued $250,000 aggregate principal amount of convertible promissory notes in February 2015 and $1,000,000 aggregate principal amount of convertible promissory notes in March 2015.

Our auditors have included an explanatory paragraph in their audit report on our financial statements for the year ended December 31, 2014, regarding our assessment of substantial doubt about our ability to continue as a going concern. Our financial statements do not include any adjustments that may result from the outcome of this uncertainty. We believe that the successful completion of this offering will eliminate the doubt and enable us to continue as a going concern. However, if we are unable to successfully complete this offering, we will need to obtain alternate financing or create operational plans to continue as a going concern.

We believe the net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operating plan through April 2016 and anticipated commercial launch of Canalevia for CID in dogs, as well as for the pivotal data and regulatory filing with the FDA to expand the indication to general watery diarrhea in dogs. However, our operating plan may change due to many factors currently unknown to us, and we may 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 our business. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. We may also not be successful in entering into partnerships that include payment of upfront licensing fees for our products and product candidates for markets outside the United States,

where appropriate. If we do not generate upfront fees from any anticipated arrangements, it would have a negative effect on our operating plan.

We expect that we will increase our expenditures following the closing of this offering once we have additional capital on hand in order to continue our efforts to develop animal health products, continue to commercially launch Neonorm and continue development of Canalevia in the near term. We have agreed to pay Indena S.p.A. fees of approximately $2.1 million under memorandums of understanding relating to the establishment of our commercial manufacturing arrangement. The exact amounts and timing of any expenditures may vary significantly from our current intentions.

Cash Flows

The following table shows a summary of cash flows for the periods set forth below:

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
Cash used in operating activities	$ (334,839)	$(5,463,218)
Cash used in investing activities	—	(55,149)
Cash provided by financing activities	520,206	6,178,192

Cash Used in Operating Activities

During the period from June 6, 2013 (inception) through December 31, 2013, cash used in operating activities was the result of our net loss of $801,203 offset by the issuance of common stock to Napo for services $359,055, further offset by changes in operating assets and liabilities of $104,628.

During the year ended December 31, 2014, cash used in operating activities was the result of our net loss of $8,609,575, less non-cash expenses related to warrants and stock-based compensation of $316,296, changes in operating assets and liabilities of $1,600,865, and non-cash expense of the write-off of certain materials received from Napo of $1,082,626.

Cash Used in Investing Activities

During the period from June 6, 2013 to December 31, 2013, we did not have any cash provided by or used in investing activities. In the year ended December 31, 2014, cash used in investing activities primarily consisted of purchases of manufacturing-related equipment.

Cash Provided by Financing Activities

During the period from June 6, 2013 through December 31, 2013, cash provided by financing activities primarily consisted of the gross proceeds from the issuance of convertible promissory notes and warrants to purchase common stock. On February 4, 2014, the convertible notes issued in 2013 were converted in full in exchange for an aggregate of 207,664 shares of common stock at a conversion price of $2.5281, which was equal to 75% of the price per share paid by the purchasers of Series A preferred stock.

During the year ended December 31, 2014, cash provided by financing activities consisted of net proceeds of $6,658,241 from the issuance of 3,015,902 shares of Series A preferred stock and $1.1 million from the issuance of convertible promissory notes and $900,000 from a standby bridge facility.

Description of Indebtedness

Standby Lines of Credit, Convertible Notes and and Warrant Issuances

In August 2014, we entered into a standby line of credit with an individual, who is an accredited investor, for up to $1.0 million pursuant to a Line of Credit Loan Agreement dated August 26, 2014. The

minimum amount of any drawdown is $250,000, the lender has no obligation to fund more than once every 10 calendar days, we must provide 15 business days prior notice for any drawdown and may not draw down funds after March 31, 2015. Outstanding borrowings bear interest at a rate of 3.0% per annum, and all borrowings are due in full on the one-year anniversary of the issue date. Following the closing of this offering, outstanding principal amounts borrowed under the standby line of credit may be converted, at the option of the lender, into shares of our common stock at a conversion price equal to 80% of the initial public offering price per share. In connection with the entry into the standby line of credit, we issued the lender a warrant to purchase 33,333 shares of our common stock at an exercise price equal to $5.60 per share, which expires in August 2016. As of December 31, 2014, we had not made any drawdowns under this facility.

Pursuant to an Amended and Restated Standby Bridge Financing Agreement (as amended by Amendment No. 1 thereto), dated as of December 3, 2014 by and between us and GBP Life Science Holdings, LLC, or GPB, and 31 Group LLC, or 31 Group, both accredited investors, on December 3, 2014, we drew down $900,000, the full amount of loans available under the facility (which $900,000 reflected a $100,000 original issue discount), and in connection therewith we issued to each of GBP and 31 Group a $500,000 principal amount senior secured note dated December 3, 2014 (which notes reflected the amounts loaned to us by each investor and the $100,000 original issue discount ($50,000 per note)). The notes mature on or about June 3, 2015, and provide that payment is accelerated to the closing of this offering. Upon repayment of the notes, we will pay aggregate interest thereon in an amount of $120,000 ($60,000 per note). In addition, repayment of the notes shall be in the amount of (a) 114% of the aggregate principal amount, all interest and all other amounts due under the note and related documents if the repayment occurs before April 2, 2015, (b) 116% of the aggregate principal amount, all interest and all other amounts due under the note and related documents if the repayment occurs between 121 and 150 days after the December 3, 2014 issuance date of the note and (c) 118% of the aggregate principal amount, all interest and all other amounts due under the note and related documents if the repayment occurs between 151 and 180 days after the December 3, 2014 issuance date of the notes or upon maturity. In connection with the entry into the agreement, we issued to each of GBP and 31 Group a warrant dated December 3, 2014 to purchase such number of shares of our common stock equal to $500,000 divided by the exercise price. The exercise price of the warrant was equal to the lesser of (i) 80% of the initial public offering price and (ii) 80% of the lowest gross price per share of our common stock sold in a private placement in a transaction or a series of related transactions that equal or exceed $4,000,000 prior to the initial public offering. Such warrants will become exercisable on June 3, 2015 and expire on June 3, 2020. In March 2015, we agreed with the holders of the warrants that the exercise price of the warrant would be initially fixed at $5.60 per share of our common stock, and the warrants would each be exercisable into an aggregate of 178,572 shares of our common stock. See "Underwriting—Certain Transactions."

On December 23, 2014, pursuant to a convertible note and warrant purchase agreement, we issued $650,000 aggregate principal amount of convertible promissory notes to three accredited investors. In February 2015, we issued an additional $250,000 aggregate principal amount of notes pursuant to this convertible note purchase agreement to two additional accredited investors. In connection therewith, we amended and restated the terms of convertible notes issued in December 2014. All $900,000 aggregate principal amount of these notes bear interest at 12% per annum and become payable upon demand by the holders within 30 days following this offering. In the event this offering is consummated on, or prior to, June 30, 2015, the noteholders may convert the notes at a conversion price equal to $5.60 per share (80% of the initial public offering price). If these notes have not been converted prior to July 31, 2015, nor declared due and payable by the holders within 30 days after this offering, the maturity date will automatically be extended to July 31, 2016 if we have not otherwise elected to prepay these notes within 30 days after this offering. If we have not consummated this offering on, or prior to, June 30, 2015, the holders may convert the principal amount under these notes into shares of our common stock at a conversion price of $2.696 per share at any time prior to July 31, 2016. We also issued these investors three-year warrants to purchase an aggregate 80,355 shares of our common stock (determined by dividing 50% of the

corresponding original principal amount issued by the exercise price). If this offering is consummated prior to June 30, 2015, the exercise price will be $5.60 per share (80% of the initial public offering price). If this offering has not been consummated by June 30, 2015, the exercise price will be $2.696 per share. In March 2015, the holders of $650,000 aggregate principal amount of these notes irrevocably elected to have their notes automatically convert into shares of our common stock upon the closing of this offering at a conversion price of $5.60 per share. Accordingly, we expect to issue these holders an aggregate of 116,070 shares of our common stock upon the closing of this offering.

Off-Balance Sheet Arrangements

Since inception, we have not engaged in the use of any off-balance sheet arrangements, such as structured finance entities, special purpose entities or variable interest entities.

Commitments and Contingencies

The following table summarizes contractual obligations as of December 31, 2014:

	Payments Due by Period				
	Total	Less Than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years
Napo License Agreement(1)	$ 1,875,000	$ —	$ 1,875,000	$ —	$ —
Convertible notes payable(2)	1,100,000	1,100,000	—	—	—
Notes payable	1,000,000	1,000,000	—	—	—
Contract manufacturing(3)	$ 2,100,000	$ 2,100,000	—	—	—
Sublease(4)	63,795	63,795	—		
Total(5)	$ 6,138,795	$ 4,263,795	$ 1,875,000	$ —	$ —

(1) The Napo License Agreement obligates us to pay (i) license fees upon achievement of a cumulative level of $2.0 million of product sales, (ii) royalties on net sales of products utilizing licensed technology and (iii) milestone payments. Royalties are dependent on future product sales and are not reflected in the table above, as they are not estimable. Milestone payments are not payable if we complete this initial public offering prior to December 31, 2015 and are not reflected in the table above. In January 2015, the license agreement was amended to reduce the remaining license fee payable to $1,625,000 with $1,175,000 due in 2015 and the remainder in 2016.

(2) Does not include an additional $250,000 aggregate principal amount of notes issued February 2015.

(3) As of December 31, 2014, our memorandums of understanding with Indena S.p.A. reflected the payment of €1.7 million, including contingent payments based on certain deliverables or events. In February 2015, we agreed to modify the payment schedule to delay certain payments to later in 2015 and revised total payments to €1.8 million.

(4) Represents future lease payments for our San Francisco, California headquarters.

(5) Does not include any amounts that may become payable under our August 2014 $1.0 million standby line of credit.

The contractual commitment amounts in the table above are associated with agreements that are enforceable and legally binding. We also enter into agreements in the normal course of business with contract research organizations for clinical trials and with vendors for preclinical studies and other services and products for operating purposes, which are generally cancelable at any time by us with advance written notice. The amounts due under these agreements are not included in the above tables.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Fluctuation Risk

Our cash and cash equivalents as of December 31, 2014 were held in a cash account. Upon completion of this offering, the proceeds from the sale of shares of our common stock will be placed in interest bearing accounts. As a result, our primary exposure to market risk for our cash will be interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. However, because our cash is held in bank accounts, a sudden change in the interest rates associated with our cash and cash equivalents balances would not be expected to have a material impact on our financial condition or results of operations.

We do not have any foreign currency or derivative financial instruments.

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 we base our estimates and judgments on our experience and on various other factors that we believe to be reasonable under the circumstances, actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies used in the preparation of our financial statements require significant judgments and estimates. For additional information relating to these and other accounting policies, see Note 2 to our audited financial statements, appearing elsewhere in this prospectus.

Accrued Research and Development Expenses

As part of the process of preparing our financial statements, we are required to estimate accrued research and development expenses. Estimated accrued expenses include fees paid to vendors and clinical sites in connection with our clinical trials and studies. We review new and open contracts and communicate with applicable internal and vendor personnel to identify services that have been performed on our behalf and estimate the level of service performed and the associated costs incurred for the service when we have not yet been invoiced or otherwise notified of the actual cost for accrued expenses. The majority of our service providers invoice us monthly in arrears for services performed or as milestones are achieved in relation to our contract manufacturers. We make estimates of our accrued expenses as of each reporting date.

We base our accrued expenses related to clinical trials and studies on our estimates of the services received and efforts expended pursuant to contracts with vendors, our 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. We estimate 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 our estimate, we adjust the related expense accrual accordingly on a prospective basis. If we do not identify costs that have been incurred or if we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates. To date, we have not made any material adjustments to our estimates of accrued research and development expenses or the level of services performed in any reporting period presented.

Accounting for Stock-Based Compensation

During 2013, we did not issue any stock awards to employees, directors or consultants and did not incur any stock based compensation expense. Beginning in the second quarter of 2014, we awarded options and restricted stock units. We measure stock-based awards granted to employees and directors at fair value on the date of grant and recognize 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.

Key Assumptions. Our 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 our common stock, the expected term of the option, risk-free interest rates and the expected dividend yield of our common stock. These estimates involve inherent uncertainties and the application of management's judgment. If factors change and different assumptions are used, our stock-based compensation expense could be materially different in the future. These assumptions are estimated as follows:

- Fair value of our common stock—Because the common stock is not yet publicly traded, we estimated the fair value of our common stock, as discussed in "Common Stock Valuations" below. Upon the closing of this public offering, our common stock will be valued by reference to the publicly-traded price of our common stock.

- Expected volatility—As we do not have any trading history for our common stock, the expected stock price volatility for our 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 our stock option grants. We did not rely on implied volatilities of traded options in our industry peers' common stock because the volume of activity was relatively low. We intend 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 our own common stock share price becomes available.

- Expected term—The expected term represents the period that our stock-based awards are expected to be outstanding. It is based on the "simplified method" for developing the estimate 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. We intend 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—We have never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future. Consequently, we used an expected dividend yield of zero.

- Forfeitures—We estimate forfeitures at the time of grant and revise those estimates periodically in subsequent periods. We use historical data to estimate pre-vesting option forfeitures and record stock-based compensation expense only for those awards that are expected to vest.

Common Stock Valuations. The fair value of the common stock underlying our stock options was determined by our 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 our common stock underlying those options on the date of grant. The valuations of our 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 we used in the valuation model are highly

complex and subjective. We base our assumptions on future expectations combined with management judgment. In the absence of a public trading market, our board of directors, with input from management, exercised significant judgment and considered numerous objective and subjective factors to determine the fair value of our 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 we included the following factors:

- the prices, rights, preferences and privileges of our Series A preferred stock relative to those of our common stock;
- lack of marketability of our common stock;
- our actual operating and financial performance;
- current business conditions and projections;
- hiring of key personnel and the experience of our management;
- our stage of development;
- illiquidity of share-based awards involving securities in a private company;
- the U.S. capital market conditions; and
- likelihood of achieving a liquidity event, such as this offering or a merger or acquisition of our company given prevailing market conditions.

Following the closing of this initial public offering, the fair value per share of our common stock for purposes of determining stock-based compensation will be the closing price of our common stock as reported on The NASDAQ Stock Market on the applicable grant date.

Classification of Securities

We apply 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.

Income Taxes

As of December 31, 2014, we had net operating loss carryforwards for federal and state income tax purposes of $9,087,176 and 9,068,156, respectively, which will begin to expire in 2033, subject to limitations. Our management has evaluated the factors bearing upon the realizability of our deferred tax assets, which are comprised principally of net operating loss carryforwards. Our management concluded that, due to the uncertainty of realizing any tax benefits as of December 31, 2014, a valuation allowance was necessary to fully offset our deferred tax assets. We have evaluated our uncertain tax positions and determined that we have no liabilities from unrecognized tax benefits and therefore we have 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. In the event we have a change in ownership in the future, as defined by the tax law, utilization of the carryforwards could be limited.

Recently Issued Accounting Pronouncements

In August 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2014-15, "Presentation of Financial Statements—Going Concern (Subtopic 205-40)—Disclosure of Uncertainties about an Entity's Ability to Continue as a Going

Concern," which provides guidance regarding management's responsibility to assess whether substantial doubt exists regarding the ability to continue as a going concern and to provide related footnote disclosures. In connection with preparing financial statements for each annual and interim reporting period, management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the company's ability to continue as a going concern within one year after the date that the financial statements are issued (or within one year after the date that the financial statements are available to be issued when applicable). This ASU is effective for the annual period ending after December 15, 2016, and for annual periods and interim periods thereafter. We are evaluating the new guidance and have not determined the impact this standard may have on our financial statements.

In June 2014, the FASB issued authoritative guidance that eliminates the distinction of a development stage entity and certain related disclosure requirements, including the elimination of inception-to-date information on the statements of operations, cash flows and stockholders' equity. The amendments will be effective prospectively for annual reporting periods beginning after December 15, 2014, and interim periods within those annual periods, however early adoption is permitted. We elected to early adopt this standard in the year ended December 31, 2014 and therefore eliminated the presentation of inception to date information.

In June 2014, the FASB issued authoritative guidance that requires that a performance target that affects vesting and that could be achieved after the requisite service period be treated as a performance condition. The performance target should not be reflected in estimating the grant-date fair value of the award. Compensation cost should be recognized in the period in which it becomes probable that the performance target will be achieved and should represent the compensation cost attributable to the period(s) for which the requisite service has already been rendered. If the performance target becomes probable of being achieved before the end of the requisite service period, the remaining unrecognized compensation cost should be recognized prospectively over the remaining requisite service period. The total amount of compensation cost recognized during and after the requisite service period should reflect the number of awards that are expected to vest and should be adjusted to reflect those awards that ultimately vest. The requisite service period ends when the employee can cease rendering service and still be eligible to vest in the award if the performance target is achieved. This guidance will be effective for annual periods (and interim periods within those annual periods) beginning after December 15, 2015. We will implement this guidance for all interim and annual periods beginning after December 15, 2015. The adoption of this guidance is not expected to have an impact on our financial condition, results of operations or cash flows.

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, 2016 and allows for prospective or retrospective application. We are evaluating this pronouncement and have not yet determined the impact it will have on our financial statements.

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. We have irrevocably elected not to avail ourselves of this extended transition period, and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

BUSINESS

Overview

We are an animal health company focused on developing and commercializing first-in-class gastrointestinal products for companion and production animals. Canalevia is our lead prescription drug product candidate for the treatment of various forms of watery diarrhea in dogs. We achieved statistically significant results in a canine proof-of-concept study completed in February 2015, supporting the conclusion that Canalevia treatment is superior to placebo, with 91% of the Canalevia-treated dogs achieving a formed stool during the study versus 50% of the placebo-treated dogs. We also initiated filing of a rolling new animal drug application, or NADA, with the U.S. Food and Drug Administration, or FDA, for Canalevia for chemotherapy-induced diarrhea, or CID, in dogs, at the end of 2014. Canalevia is a canine-specific formulation of crofelemer, an active pharmaceutical ingredient isolated and purified from the *Croton lechleri* tree. A human-specific formulation of crofelemer, 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 our management team developed crofelemer, including while at Napo Pharmaceuticals, Inc., or Napo. Neonorm is our lead non-prescription product to improve gut health and normalize stool formation in animals suffering from watery diarrhea, or scours. We launched Neonorm in the United States at the end of 2014 for preweaned dairy calves under the brand name Neonorm Calf and expect to launch additional formulations of Neonorm for other animal species in 2015. We have already shipped approximately $450,000 of Neonorm Calf. Neonorm is a botanical extract also derived from the *Croton lechleri* tree. Canalevia and Neonorm are distinct products that are formulated to address specific species and market channels. We have 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.

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 there are no FDA-approved anti-secretory products for the treatment of diarrhea. We estimate that in the United States, veterinarians see approximately six million annual cases of acute and chronic watery diarrhea in dogs, approximately two-thirds of which are acute watery diarrhea. We believe Canalevia will be effective in treating watery diarrhea because it acts at the last physiological step, conserved across mammalian species, in the manifestation of watery diarrhea, regardless of cause, by normalizing ion and water flow in the intestinal lumen. We are first seeking a minor use, minor species, or MUMS, designation with the FDA for Canalevia for CID in dogs to shorten the timeframe to commercialization. If we receive conditional approval pursuant to MUMS designation, we expect to commercialize Canalevia for CID in dogs in early 2016. We completed a canine proof-of-concept study in February 2015, with statistically significant results, in support of protocol concurrence discussions with the FDA regarding expansion of labeled indications of watery diarrhea beyond CID, to include general acute watery diarrhea. We plan to market Canalevia, if approved, through our focused direct sales force and to complement our internal efforts with distribution partners.

According to the Dairy 2007 study conducted by the United States Department of Agriculture, or USDA, almost one in four preweaned dairy heifer, 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. We believe the incidence rate of scours and its corresponding financial impact represent a large opportunity and that Neonorm has the potential to effectively meet this need. In our clinical study completed in May 2014, Neonorm demonstrated a statistically significant reduction in the severity of watery diarrhea, reduced morbidity and mortality, and improved weight gain as compared to placebo in newborn dairy calves with scours.

We recently launched Neonorm for preweaned dairy calves in the United States under the brand name Neonorm Calf. Our commercialization activities are initially focusing on large commercial dairy

operations and include active ongoing education and outreach to dairy industry key opinion leaders, such as academics involved in dairy cattle research or who advise the dairy cattle industry, as well as veterinarians. We intend to augment these commercialization efforts by working with regional distributors to leverage the geographic concentration of the dairy market in the United States as well as national distributors to provide wider geographic access to our products. We recently signed a distribution agreement with Biogenesis Bagó, a veterinary biotechnology company in Latin America, a region that contains approximately 401 million dairy and beef cattle 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. In addition, where appropriate, we intend to explore other international and distribution partnership arrangements. In August 2014, we entered into our first regional distribution agreement with Animart, Inc. for the Upper Midwest region and, together with this partner, launched Neonorm at the 2014 World Dairy Expo, and in September 2014, entered into an agreement with Vedco, Inc., a national master distributor, who also distributes prescription products for the companion animal market. We expect the ongoing launch of Neonorm to drive awareness among veterinarians regarding the utility of our first-in-class anti-secretory *Croton lechleri*-derived products, including Canalevia.

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

Our 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. Our team also includes individuals who have prior animal health experience at major pharmaceutical companies including SmithKline Beecham Corporation, now GlaxoSmithKline LLC, the animal health group of Pfizer Inc., now Zoetis Inc., Vétoquinol S.A., Merial Limited, the animal health division of Sanofi S.A., as well as management experience at major veterinary hospital institutions.

Product Pipeline

We are developing a pipeline of prescription drug product candidates and non-prescription products to address unmet needs in animal health. Our pipeline currently includes prescription drug product candidates for eight indications across multiple species, and non-prescription products targeting seven species.

Prescription Drug Product Candidates

Product Candidates	Species	Indication	Recent Developments	Anticipated Near-Term Milestones
Canalevia	Dogs	CID	• MUMS designation / pre-NADA meeting in October 2014 • Initiated rolling NADA filing in December 2014	• Conditional NADA approval in 1st quarter of 2016
	Dogs	General watery diarrhea	• IND filed in February 2014 • Statistically significant proof-of-concept data in February 2015	• Concurrence meeting with FDA in 2015 • Initiation of pivotal trial in 2015 • Initiate filing NADA in 1st quarter of 2016
Species-specific formulations of crofelemer	Horses	Acute colitis	• IND filed in February 2014	• Safety data in 2nd half of 2015 • Apply for MUMS designation in 2nd half of 2015
	Horses	Diarrhea, colonic and gastric ulcers(1)	• IND filed in February 2015	• Proof-of-concept data in 2nd half of 2015
	Cats	General watery diarrhea	• IND filed in February 2014 • Initiated safety and palatability study in cats with diarrhea in March 2015	• Safety and proof-of-concept data in 2nd half of 2015/1st quarter of 2016
Virend (topical)	Cats	Herpes virus	• IND filed in July 2014	• Proof-of-concept and top line pivotal efficacy data in 1st quarter of 2016
Species-specific formulations of NP-500	Dogs	Obesity-related metabolic dysfunction	• IND filed September 2014	
	Horses	Metabolic syndrome	• IND filed in March 2014	
	Cats	Type II diabetes	• IND filed in March 2014	

(1) In combination with omeprazole and/or sucralfate.

Non-Prescription Products

Products	Species	Use	Recent Developments	Anticipated Near-Term Milestones
Neonorm Calf	Dairy calves	Improve gut health and normalize stool formation in preweaned dairy calves with scours	• National launch in February 2015 • U.S. regional and nationwide distribution agreements signed in 2nd half of 2014 • South American distribution agreement signed in 1st quarter of 2015, commercial launch in 2016 • Approximately $450,000 of product shipped since commercial launch	• Field study results in 2nd quarter of 2015 (study has been ongoing since 4th quarter of 2014); includes evaluation of prebiotic effect
Species-specific formulations of Neonorm	Horse foals	Normalize stool formation	• Completed pilot formulation in April 2014 • Completed safety and palatability study in November 2014	• Safety and efficacy data in 2nd half of 2015 • Commercial launch in 2015
	Adult horses	Normalize stool formation		• Safety and efficacy data in 1st quarter of 2016
	Other farm/production animals	Normalize stool formation	• Initiated market research in New Zealand and China in 2014	• Initiate proof-of-concept studies based on market research within the next 12 months

Canalevia is our lead prescription drug product candidate for CID and general watery diarrhea in dogs. Neonorm is our lead non-prescription product to improve gut health and normalize stool formation for preweaned dairy calves with scours. Both Canalevia and Neonorm are derived from the *Croton lechleri* tree and act at the same last step in a physiological pathway generally present in mammals. However, they are distinct products based on species-specific formulations of such derivatives and have distinct chemical compositions as well as different levels of purification. Canalevia is a canine-specific formulation of crofelemer, an active pharmaceutical ingredient that is an isolated and purified compound. Neonorm is a formulation of a botanical extract that is less refined than crofelemer and includes many chemical constituents.

We are developing Canalevia as a prescription drug product and Neonorm as a non-prescription product due to differences between the companion and production animal markets. Companion animal owners generally visit veterinarians, who prescribe a product to treat a disease or condition. We believe 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. We believe that data from our clinical study of Neonorm demonstrates such an economic benefit and do not believe the ability to make disease treatment claims will be needed to commercialize the product.

We are initially pursuing conditional FDA approval for Canalevia for CID in dogs pursuant to MUMS designation, and are conducting studies to broaden the Canalevia label to include general watery diarrhea in dogs. A MUMS designation is a status similar to the orphan drug designation in humans. In the case of major animal species such as dogs, cats and horses, MUMS designations are typically limited to drugs that are used to treat a small number of animals each year. For dogs and cats that number is no more than 70,000 and 120,000 animals, respectively. MUMS designation can potentially expedite the process of drug review, approval and product availability to the patient. A sponsor of a MUMS drug can apply for conditional approval, which allows the sponsor to make the drug commercially available before collecting all necessary effectiveness data, but after proving the drug is safe and showing that there is a reasonable expectation of effectiveness.

We also plan to expand our gastrointestinal product line to other animals by developing species-specific formulations and expect to seek protocol concurrences with the FDA where appropriate. For example, we have planned trials to develop formulations of crofelemer for watery diarrhea in cats and acute colitis in adult horses. We also plan to develop specific formulations of Neonorm for foals and adult horses, as well as sheep and other farm animals. 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 we change the protocol.

We have 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. Similar to our lead prescription drug product candidate, these products were tested in animals for safety to support their development for use in humans. We recently expanded our gastrointestinal product line to include combinations of our proprietary anti-secretory products derived from *Croton lechleri* with the non-absorbed antibiotic, rifaximin, a human approved product, for gastrointestinal indications in all animals. We are leveraging the data and knowledge gained during the development of human therapeutics into veterinary applications.

Business Strategy

Our 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. To accomplish this goal, we plan to:

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

Our management team collectively has over 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, pre-clinical and clinical development and regulatory strategy. In addition to our near-term development efforts advancing Canalevia for dogs and Neonorm for preweaned dairy calves, we are developing formulations of these products to address the unmet medical need for the treatment of watery diarrhea and to improve gut health and normalize stool formation across multiple animal species and market channels. Our 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 our 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 our own targeted commercial efforts, through the launch of Neonorm.

We recently launched Neonorm in the United States under the brand name Neonorm Calf. We intend to establish a focused direct sales force, initially for the production animal markets and have already hired our first sales representative. We will direct our sales and marketing efforts on educational activities and outreach to key opinion leaders and decision makers at targeted regional and global accounts and also plan to continue to partner with leading distributors to commercialize our products. We expect that our 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. We believe this overall approach is scalable and transferable as we expand our commercialization efforts to companion animals, as well as when we expand internationally.

Launch Canalevia and our other product candidates for companion animals, if approved, leveraging the commercial capabilities and brand awareness we are currently building.

We expect to launch Canalevia in 2016 for both CID and general watery diarrhea in dogs, leveraging the sales and marketing capabilities established from our launch of Neonorm. As our focus shifts to companion animals, our direct sales force will also increasingly target high prescribing veterinarians for companion animals. We believe the third-party sales and distribution networks we establish in connection with our launch of Neonorm will be highly relevant for the companion animal market as well. In addition, while we believe Neonorm addresses a smaller market opportunity than our companion animal product candidates, it is a first-in-class product with the same novel mechanism of action as Canalevia. As such, Neonorm provides a scientific and promotional foundation that we believe we can leverage for our companion animal prescription product development and launch events.

Expand to international markets.

We intend to leverage our 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 our prescription and non-prescription products. As an example, we recently 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. Further, certain markets, such as high performance horses, have strong international synergies benefiting market awareness and demand. We may also enter

into partnerships that include payment of upfront licensing fees for our 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 our broad intellectual property portfolio, deep pipeline and extensive botanical library.

In addition to our anti-secretory gastrointestinal product development efforts, we have expanded the depth of our gastrointestinal pipeline product candidates to include combinations of our proprietary anti-secretory products derived from *Croton lechleri* with the non-absorbed antibiotic, rifaximin, a human approved product, for gastrointestinal indications in all animals. We are 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, we have exclusive worldwide rights to Napo's library of over 2,300 medicinal plants for veterinary use in all species. We believe we have the product candidates and expertise to address many unmet animal health needs for both companion and production animals. We believe our extensive library of medicinal plants will enable us to develop first-in-class products that address significant health issues and concerns of many markets and geographies.

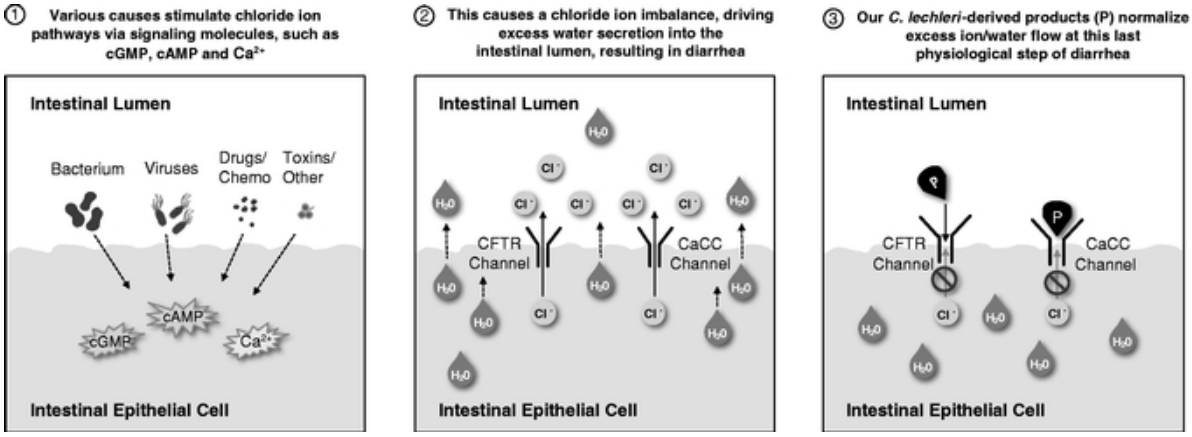
Products in Development

Market Background—Watery Diarrhea

We believe there is an unmet medical need for the treatment of watery diarrhea. The devastating dehydration that often occurs as a result of watery 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 no approved anti-secretory agents that directly address the water loss associated with watery diarrhea. Current treatments for watery 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.

We believe that an ideal treatment for watery 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. We believe addressing water loss associated with watery 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. Our 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 watery diarrhea. As a result, we believe that our products and product candidates may be effective in addressing watery 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 our gastrointestinal products), are generally present in mammals. We therefore expect that the clinical benefit shown in humans and preweaned dairy calves will be confirmed in multiple other species, including dogs. Accordingly, we believe we can bring to market multiple products among multiple species that are first-in-class and effective in preventing the debilitating and devastating ramifications of watery diarrhea in animals.

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



Canalevia—Chemotherapy-Induced Diarrhea in Dogs

Overview

Canalevia is an oral, twice daily, chewable, beef-flavored formulation of crofelemer that we are 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. We are seeking MUMS designation for Canalevia for CID in dogs to shorten the timeframe to commercialization. We initiated filing of a rolling NADA at the end of 2014. If we receive conditional approval from the FDA for this indication, we expect to launch Canalevia for CID in dogs by early 2016. Under MUMS designation, we would be required to initiate a pivotal study in the five years following conditional approval to generate the data required for full approval. We expect to meet this requirement with data generated from our ongoing clinical development program for the expanded indication of general watery diarrhea in dogs. Canalevia recently achieved statistically significant results in a canine proof-of-concept study completed in February 2015, supporting the conclusion that Canalevia treatment is superior to placebo, with 91% of the Canalevia treated dogs achieving a formed stool during the study versus 50% of the placebo-treated dogs.

Market Opportunity

We believe there is a significant unmet medical need for the treatment of CID in dogs. There is currently no FDA-approved anti-secretory product to treat CID in dogs. We estimate 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 of the most commonly administered chemotherapy drugs. Similar to the effects in humans, we believe 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.

Our Solution

We believe 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 watery diarrhea. As a result, we believe Canalevia may be effective in the treatment of watery diarrhea, regardless of cause, including 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, 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. 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. We believe these studies will meet FDA requirements for a pivotal safety package and will support our anticipated dosing of Canalevia in dogs.

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, we 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.

Next Steps and Commercialization Plans

We are seeking MUMS designation for Canalevia for the treatment of CID in dogs. MUMS designation provides an opportunity to shorten the time to commercialization. We are relying on previously conducted toxicology studies in dogs that were required for FDA approval of the human formulation of crofelemer to provide required safety data. We have established a safety database that we believe meets the qualifications for MUMS designation. We had our initial meeting with the FDA in October 2014 to reach agreement on the timing for submissions of the technical sections of an NADA filing, and initiated a rolling NADA filing for Canalevia for CID in dogs in December 2014. If we receive conditional approval with MUMS designation, we could begin sales of Canalevia for this indication in the first quarter of 2016. With conditional approval under MUMS designation, we would be required to initiate a pivotal study in the five years following such conditional approval to generate the data required for full FDA approval. We expect to meet this requirement with data generated from our ongoing clinical development program for the expanded indication of general watery diarrhea in dogs.

We plan to market Canalevia, if conditionally approved by the FDA, through a focused direct sales force and to complement our internal efforts with a distribution partner.

Canalevia—Expansion to General Watery Diarrhea in Dogs

Overview

We are also developing Canalevia for general watery diarrhea in dogs, regardless of cause. According to the American Veterinary Medical Association, there were approximately 70 million dogs in the United States in 2012. We recently completed a randomized, blind, multicenter proof-of-concept study of Canalevia in dogs in February 2015, 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 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.

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 no FDA-approved anti-secretory agents to treat the indication. We estimate that veterinarians see approximately six million annual cases of acute and chronic watery diarrhea in dogs in the United States, approximately two-thirds of which are acute watery diarrhea.

Veterinarians typically treat watery 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 watery 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.

We believe that Canalevia is an ideal treatment for general watery diarrhea in dogs because of its demonstrated novel anti-secretory mechanism of action. If approved for use in general watery diarrhea in dogs, 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.

Study Protocol. The goal of the study was to investigate the treatment group differences in change from baseline fecal consistency and frequency in dogs with watery diarrhea during a three-day exposure to either Canalevia or placebo. Veterinarians or trained veterinary technicians conducted this blinded, randomized, placebo-controlled, proof-of-concept study over afive-month period using animals obtained through rescue organizations, shelters and from client owners. There were 39 dogs enrolled in the study based on a score of stool formation (described in the chart below). Dogs were enrolled in the trial if they were determined to have a baseline fecal score of 4 or 5. Dogs with bloody diarrhea (*i.e.*, fecal score of 6) and/or suspicion of parvovirus were excluded. Subsequent to enrollment, the dog was confined and treatment was administered at the beginning of the score confirmation.

Fecal Scoring Chart—Purina Dog Scale

Score	Description
1	Well-formed, moist stools
2	Soft, most, amorphous
3	Viscous liquid with some particulate matter
4	Watery, liquid stool with little particulate matter
5	Severe watery diarrhea; no particulate matter visible
6	Hemorrhagic diarrhea

Dogs were randomly allocated in a 1:1 ratio to one of two treatments. The treatments were Canalevia (crofelemer) ~2 mg/kg BID (actually dosed at 40 mg packet for animals weighing 2-20 kg and two 40 mg packets for dogs 20 - 40 kg) and placebo. Each dog was treated twice a day for three days so that six doses of test article were received. For the shelters, it was planned that six assessments of fecal scores would be taken per day for each of the three treatment days and one additional follow-up day. For dogs enrolled at clinics, there could be less data because animals can be released after four treatments if the diarrhea had resolved. Treatment was assigned as A and B, but statistical analyses were blinded as to whether the treatment assignments correspond to Canalevia or placebo.

Fecal scoring endpoints were defined using the chart above.

Fecal Score Analysis. A total of 39 dogs were analyzed: 23 on Canalevia and 16 on placebo. The mean baseline fecal score in both treatment groups is 4.2. The proportion of dogs with alleviated signs of acute watery diarrhea was analyzed. Resolution of diarrhea was defined as a fecal score of 1 or 2 at any post-baseline time. Dogs that did not have a score of 1 or 2 recorded were considered not resolved.

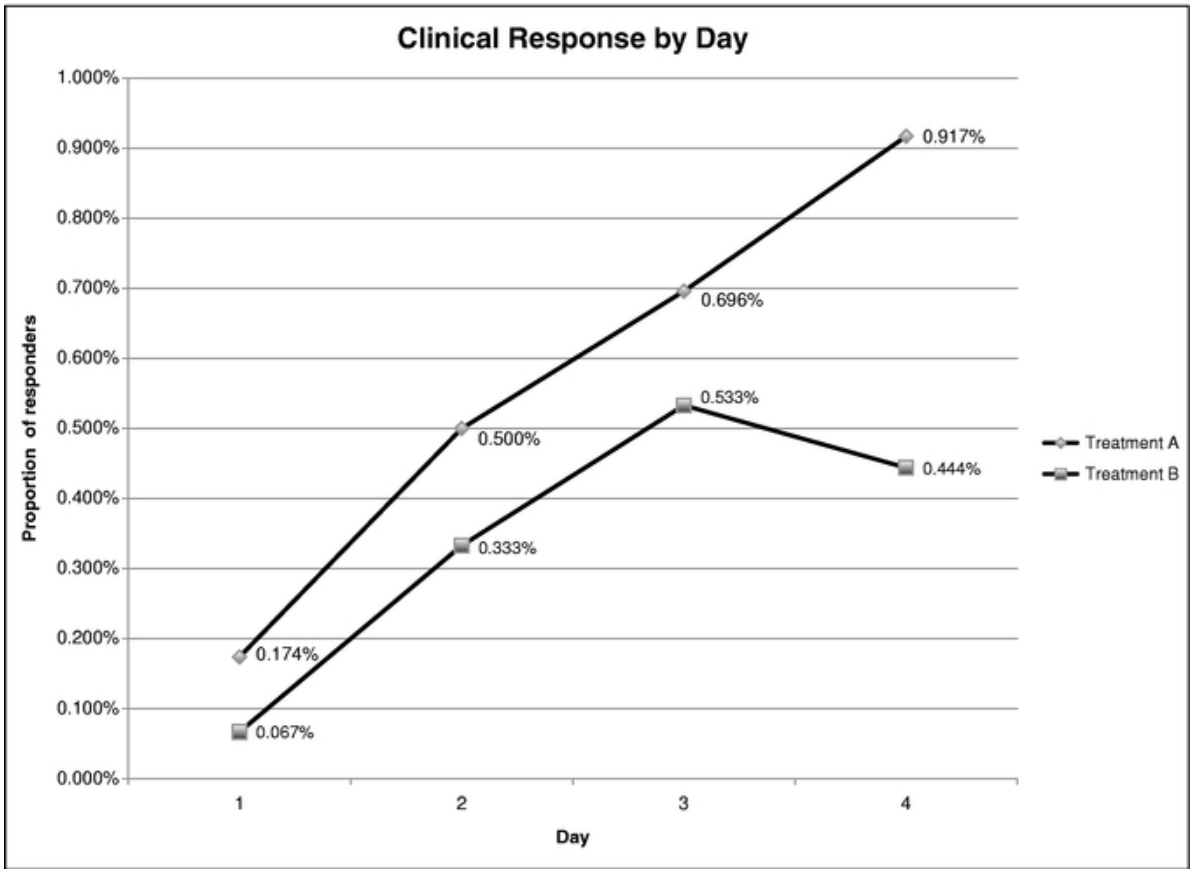
Resolution of Diarrhea. Using a definition of diarrhea resolution being a fecal score of 1 or 2 at any post-baseline time, 21 of 23 (91.3%) dogs on Canalevia responded. This contrasts with placebo, where 8 of 16 (50.0%) dogs responded. These response rates support the conclusion that a larger proportion of dogs on Canalevia respond as compared to placebo. The two-sided p-value from Fisher's Exact test is 0.0073.

Clinical Responder Evaluation. Under the framework of the endpoint definitions, each dog was coded as a responder or nonresponder on each day. As seen in the table below, response in Canalevia arm is greater than placebo on all days by at least 10%. A responder is a dog who had formed stools with no follow up unformed stool, day by day.

A Cochran-Mantel-Haenszel test stratified by day provides evidence that the clinical response in Canalevia is greater than placebo (p = 0.013).

Using a Fisher's Exact test a significant difference occurs after the treatment period, on Day 4 (p= 0.046).

Clinical Response by Day



The protocol for this study is based on our experience and success in previous human and dairy calf studies evaluating *Croton lechleri* derivatives and their effect on watery diarrhea. Based on the results, we expect to seek protocol concurrence from the FDA and anticipate commercial launch for Canalevia for this indication in early 2017.

Crofelemer—Equine Line Extension

We intend to develop a species-specific formulation of crofelemer to treat acute colitis in horses. We believe colitis affects thousands of horses in the United States each year. Acute colitis can cause sudden, massive fluid loss and severe electrolyte imbalances that can result in death in a matter of hours. Acute colitis often occurs when salmonella and *C. difficile*, bacteria that are normally present in the gut, are activated by stress, or when the bacteria *N. risticii* is ingested, causing Potomac horse fever. A 2009 Compendium Equine article reported fatality rates of 32% to 60% for salmonellosis and 15% to 35% for Potomac horse fever. Stress (*e.g.*, shipping, changes in daily routines, illness, hospitalization, racing), recent diet changes, recent antimicrobial administration and non-steroidal anti-inflammatory drug therapy can also put horses at risk for acute colitis. The current standard of care includes hospitalization, intubation and intravenous fluids, with little opportunity to culture stools to determine the exact source of the disease. We believe treatment of acute colitis in high-value race and performance horses with crofelemer represents a premium niche market opportunity.

We intend to seek MUMS designation for our product for treatment of acute colitis in adult horses, which may shorten the timeframe to commercialization. If approved, we believe we could launch an equine formulation of crofelemer in 2016.

We are also developing a formulation of a *Croton lechleri*-derived product potentially in combination with omeprazole and/or sucralfate as a total intestinal tract health product for horses. Ulcers are lesions of the lining of the digestive tract and are very common in horses used for many competitive activities including racing, dressage, show jumping, endurance events, and western performance. Diarrhea is often a coincident problem. We believe 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, this equine formulation of a *Croton lechleri*-derived product potentially in combination with omeprazole and/or sucralfate has the potential to address both gastric and colonic ulcers in horses, as well as diarrhea. There are currently no marketed FDA-approved treatments for colonic ulcers in horses, because physiological factors such as pH, bile, etc. render many drugs ineffective. We estimate that there are over 3.9 million performance horses in the United States. 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. We believe that many owners give their horses daily doses of omeprazole and/or sucralfate to treat and prevent ulcers, which practice can cost up to $50 per day. We believe a product treating both gastric and colonic ulcers, as well as diarrhea, would represent a significant advance in the management of gastrointestinal disease in horses. We anticipate that this product will capitalize on our work with targeted delivery in the gastrointestinal tract of other mammals.

Crofelemer—Cats

According to the American Veterinary Medical Association, there were approximately 74 million cats in the United States in 2012. We estimate that veterinarians see approximately 2.9 million annual cases of general watery diarrhea in cats. Veterinarians typically treat watery 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.

We are currently developing a species-specific formulation of crofelemer, Felevia, for cats and have begun a safety and palatability study in cats with diarrhea. We intend to continue safety, proof-of-concept and pivotal studies in cats in 2015 and 2016, with safety and proof-of-concept data in the second half of 2015 or the first quarter of 2016, and top line pivotal efficacy data in 2016. If data is positive and we receive FDA approval, we anticipate commercial launch in 2017.

Neonorm—Improve Gut Health in Preweaned Dairy Calves with Scours

Overview

This formulation of Neonorm is an enteric-coated tablet designed to be orally administered to preweaned dairy calves twice daily for three days. In our clinical study completed in May 2014, Neonorm demonstrated a statistically significant reduction in morbidity, as well as reduced mortality and improved weight gain as compared to placebo in newborn dairy calves with scours. We recently launched Neonorm for preweaned dairy calves in the United States under the brand name Neonorm Calf. We do not believe that Neonorm fits within the FDA's definition of an animal drug, food or feed additive. Thus, we do 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, we are also conducting field studies of Neonorm involving approximately 700 preweaned dairy calves in total at the following leading veterinary academic institutions: Cornell University, Tufts University and in collaboration with our distributor, Animart. We expect to announce this data in the second quarter of 2015. Our commercialization activities are initially focused on large commercial dairy operations, and include active ongoing education and outreach to dairy industry key opinion leaders in the dairy industry, such as academics involved in dairy cattle research or who advise the dairy cattle industry, as well as veterinarians.

We intend to augment these commercialization efforts by working with regional distributors to leverage the geographic concentration of the dairy market and, if appropriate, with international partners. In August 2014, we entered into our first regional distribution agreement for the Upper Midwest region, and together with this partner, launched Neonorm Calf at the 2014 World Dairy Expo. In September 2014, we entered into an agreement with a national master distributor, who also distributes prescription products for the companion animal market. We also recently signed a distribution agreement with Biogenesis Bagó, a large veterinary biotechnology company in Latin America, a region that contains approximately 401 million dairy and beef cattle 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.

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 treatments include 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 milk-producing dairy cows in the United States. We estimate from USDA sources that there were over 11 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 heifer calves are separated from their mothers shortly after birth and raised on commercial milk replacers until weaned at about 60 days of age. Male dairy calves are typically sold into the beef industry.

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 heifer 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 heifer calves that were affected by diarrhea or other digestive problems, almost three-fourths, or 74.5%, were treated with an antibiotic.

Our Solution

We believe Neonorm is an ideal solution to improve gut health and normalize stool formation in dairy calves suffering from scours. Neonorm has been formulated and clinically tested to improve gut health by specifically addressing the normalization of stool formation and ion and water flow in the intestinal lumen of newborn dairy calves with scours. Like Canalevia, Neonorm 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

Overview. Neonorm demonstrated a statistically significant reduction in the severity of watery diarrhea and reduced daily incidence of watery diarrhea in a double-blind, randomized, placebo-controlled challenge study in newborn dairy calves with scours completed in May 2014. Neonorm also showed improvements in average daily weight gain and mortality. Scours-associated financial losses to the dairy industry arise not only from dairy calf mortality and impaired growth, but also from costs associated with

veterinary care, medications and incremental labor to treat the sick dairy calves. The lifetime productivity for dairy cattle is influenced by early development and weight gain. Dairy calves with impaired preweaned growth may produce less milk over their lifetime. We believe our results demonstrate that the use of Neonorm in calves with scours can improve the economic return to dairy producers.

Study Protocol. The study enrolled 39 healthy newborn dairy calves, randomized into two groups. The calves were all challenged with enterotoxigenic *E. coli*, the most common bacterial cause of scours in dairy calves, in a controlled clinical setting. Clinical signs of watery diarrhea generally occurred 12 hours after the challenge. The first dose was administered to all calves at 12 hours. Additional doses were administered every 12 hours until hour 72 for a total of 6 doses. Twenty calves received Neonorm and 19 calves received placebo. Consistent with standard industry practice, calves with watery diarrhea were treated for dehydration with oral rehydration therapy or intravenous fluid. We examined the calves twice daily for 10 days as well as at days 15 and 25 for fecal consistency, dehydration, appetite, attitude and other adverse health disorders. In addition, all calves were weighed on the first day of the study and 25 days later. For all measurements except weight, we believe that days 1 through 8 to 10 following the *E. coli* challenge (*i.e.*, 4.5 and 6.5 days after treatment is concluded) represent the most relevant timeframe to evaluate the treatment effect of Neonorm or placebo. After that period, other digestive ailments unrelated to the challenge may occur during the preweaning development of the calves. While most calves that do not die will eventually return to normal stool formulation after suffering from scours, studies have shown that the weight loss as a result of scours has a detrimental effect on lifetime milk productivity of the dairy cow. Thus, we believe resolving scours in the first ten days after onset can have positive economic impacts.

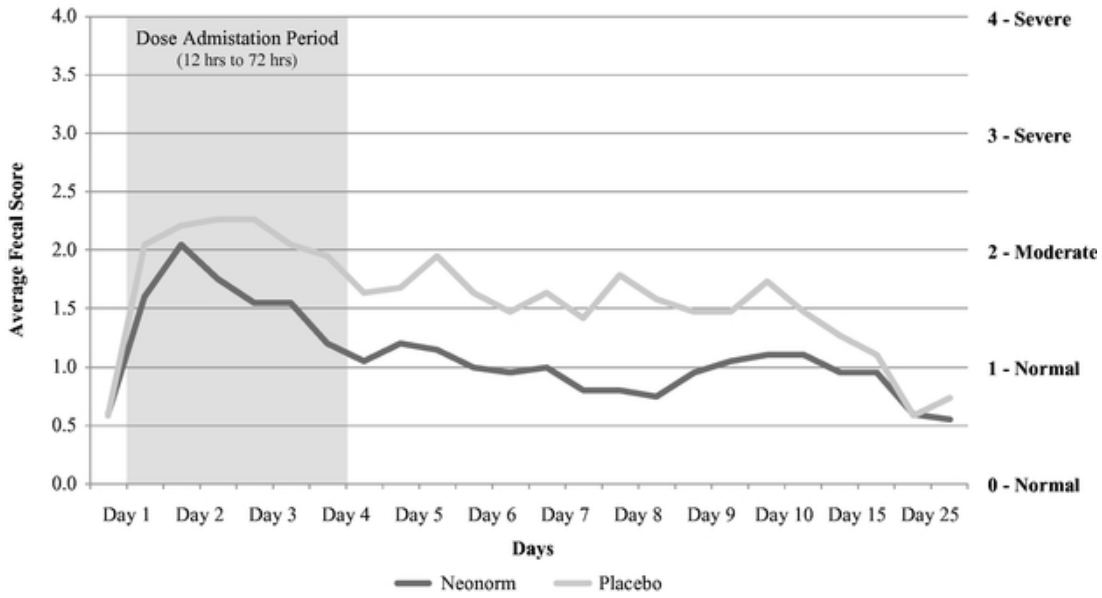
The study's goal was to evaluate the severity and incidence of diarrhea, mortality and weight gain. In this study, the "p" values were statistical calculations to determine whether the effects of Neonorm were significant in comparison to placebo based on pre-specified statistical targets. We specified that any result less than p=0.05 would be significant. The fecal scoring chart used in the study was the University of Wisconsin Calf Health Scoring Chart, modified to track a subset of the most severe, and potentially fatal, watery diarrhea, which we scored as 4, as set out in the following chart.

Modified University of Wisconsin Calf Health Scoring Chart

	Score	Calf Feces Description	Potential Treatment
Normal	0	Normal, formed pasty feces	None
	1	Semi-formed pasty feces	
Moderate Diarrhea	2	Loose, watery feces but stays on top of bedding	Oral electrolytes
Severe Diarrhea	3	Watery feces with mucus, sifts through bedding	Oral electrolytes, intravenous fluids, and
	4	Diarrhea with blood	antibiotics

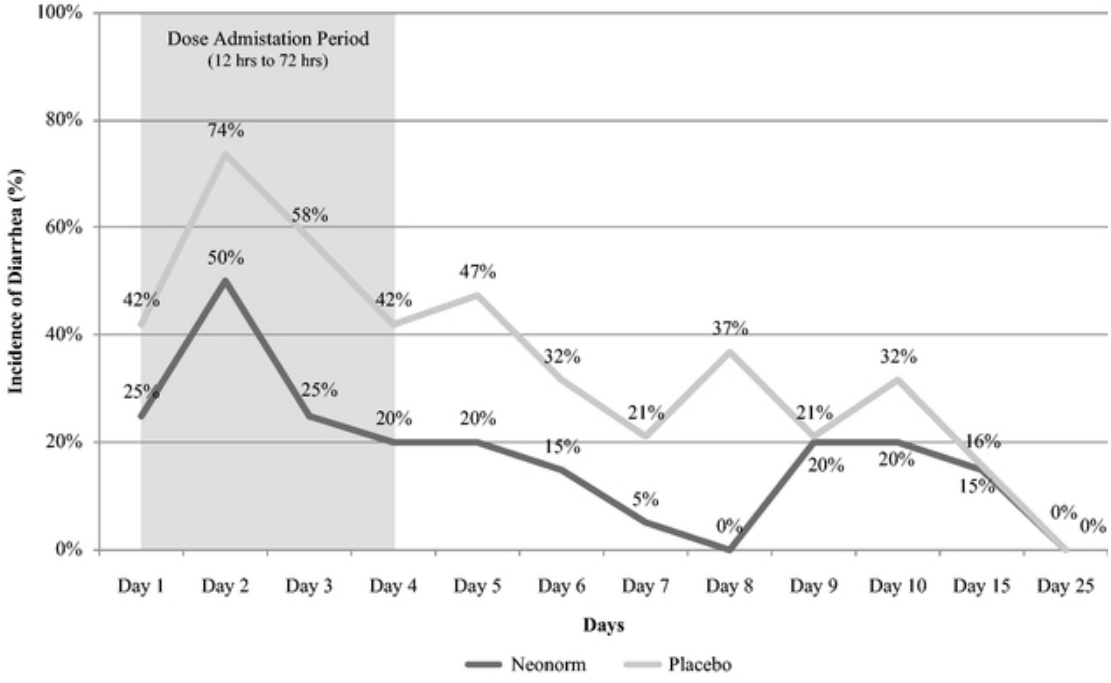
Reduced Fecal Consistency Score. Neonorm significantly decreased the severity of watery diarrhea over the course of the 25-day period (p=0.0133) and increased the speed of improvement in watery diarrhea, as shown by the decrease in average daily fecal scores. Quantitative analysis of fecal samples collected through day 10 further supported these results. Neonorm significantly increased the average fecal dry matter content, an objective measure of fecal consistency, compared to placebo (p=0.03). The multivariate analyses used each fecal consistency score, or fecal dry matter measure, data point collected for each animal in calculating statistical significance. The following chart sets out the average fecal consistency score over 25 days.

Average Daily Calf Fecal Scores



Reduced Daily Incidence of Watery Diarrhea. Neonorm decreased the daily incidence of watery diarrhea, which was defined as an average daily fecal consistency score of two or greater, over the 25-day period (p=0.0545). On day eight, there were no calves that had been administered Neonorm with an average daily fecal score of two or greater, whereas 37% of calves administered placebo had an average daily fecal score of two or greater.

Daily Incidence of Watery Diarrhea



Proactive and Reactive Use. We believe the data support both the proactive and reactive use of Neonorm. In order to standardize the treatments, the first dose was administered 12 hours after the challenge with the bacteria. At that stage, some calves showed signs of watery diarrhea and others were at an earlier phase of the disease pathogenesis. We anticipate that Neonorm would be used in a comparable manner in dairy operations to dose sick calves reactively, and dose other calves proactively before development of clinical symptoms. We are further evaluating proactive use of Neonorm in field studies on commercial dairy farms.

Duration, Mortality and Weight Gain. Calves that were administered Neonorm showed a reduced average duration of watery diarrhea as compared to placebo. While this study was not powered for statistical significance, we plan to use our observations in this study to power our planned field studies to seek statistical significance on these endpoints. The following chart shows the average duration of watery diarrhea, as defined by a fecal score of two or greater, and severe watery diarrhea, as defined by a fecal score of three or greater, of calves administered Neonorm as compared to placebo. Measurements were taken twice daily and each case of watery or severe diarrhea counted for one half day of duration. Calves that died during the study were measured based on their most recently available fecal score until day 25.

	Average Duration of Watery Diarrhea (Score 2 and above)	Average Duration of Severe Watery Diarrhea (Score 3 and 4)
Administered	3.03 days	1.10 days
Placebo	5.16 days	2.42 days

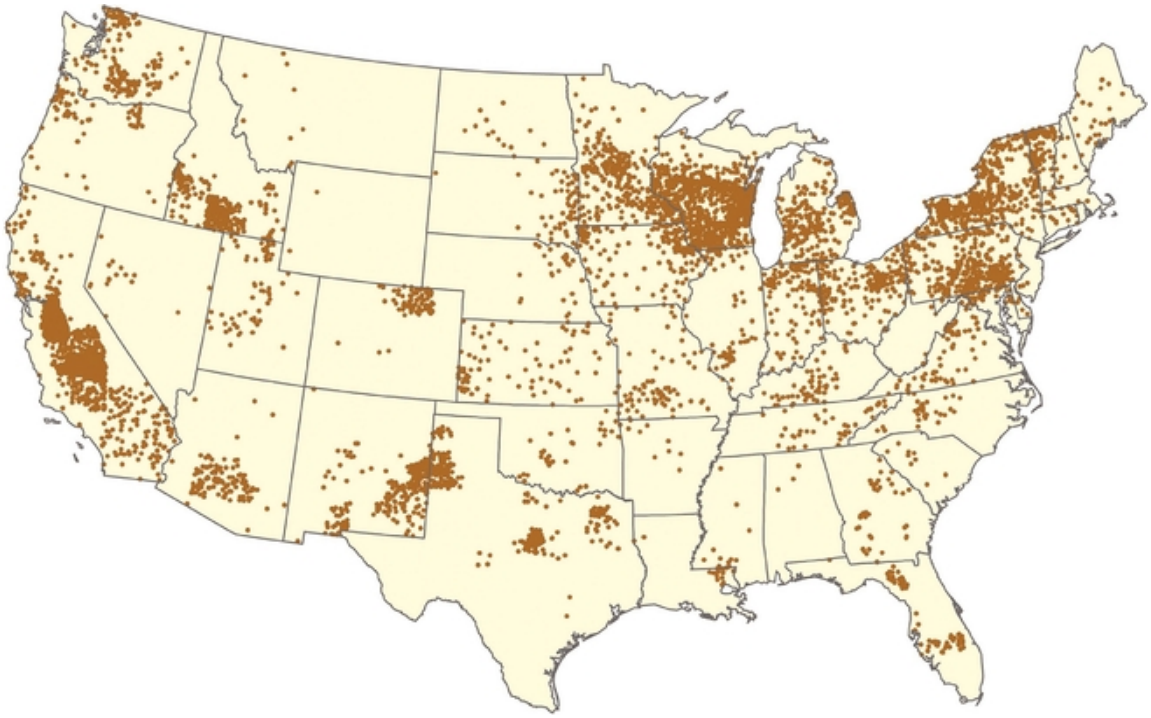
After 25 days, only one calf died in the group administered Neonorm as compared to four calves in the placebo group. In addition, the calves administered Neonorm gained an average of 281g/day compared to 219g/day for the control group (62g difference per day). The average difference over the 25 day study period was a weight gain of 15.5 pounds for calves administered Neonorm, compared to 12.1 pounds for those receiving placebo, which is a relative improvement of approximately 28% during the period. While this study was not powered for statistical significance for these endpoints, we plan to use our observations in this study to power our planned field studies to seek statistical significance on weight gain. The lifetime productivity for dairy cattle is influenced by early development and weight gain. Preweaning nutrition has a significant effect on mammary gland development, the timing of puberty and the age at which the dairy cow first produces milk.

To support our commercial launch, we are also conducting field studies of Neonorm involving approximately 700 preweaned dairy calves in total at the following leading veterinary academic institutions: Cornell University, Tufts University and in collaboration with our distributor, Animart. We anticipate announcing data from these studies by the second quarter of 2015. If the results confirm our existing data, and based on current industry cost standards, we estimate that Neonorm could save approximately $110 on average per treated dairy calf presenting with scours, accounting for costs to replace the dairy calf, costs of supportive care and improvement in future milk production. We believe that dairy farm operators currently target approximately $3 of expected savings for every $1 spent on animal health products. We believe our study demonstrates the potential for Neonorm to be a novel first-in-class product that provides health and economic benefits to the dairy industry.

Commercialization Plans

We recently launched Neonorm in the United States under the brand name Neonorm Calf. In July 2014, we commenced initial launch activities and met with key opinion leaders at a dairy industry conference, and in August 2014, we entered into our first regional distribution agreement with Animart, Inc. for the Upper Midwest region. In September 2014, together with this distribution partner, we launched Neonorm Calf at the World Dairy Expo, which launch focused on key dairy states including Wisconsin, Minnesota and Iowa. In September 2014, we entered into an agreement with Vedco, Inc., a national master distributor, who also distributes prescription products for the companion animal market.

While Animart, Inc. will focus their distribution primarily to dairy farm operator customers in the Upper MidWest region, Vedco, Inc. will distribute Neonorm Calf to other distributors nationwide, who then sell to their veterinary clinic customers. We launched Neonorm Calf nationwide in early 2015. According to the USDA, ten states account for approximately 75% of the U.S. dairy market, with three primary geographic regions: the North East, the Upper Midwest and California, as illustrated by the following map.



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Workforce Needs in Veterinary Medicine estimates that there are approximately 1,000 dairy veterinarians engaged in the food-animal industry in the United States. We believe a focused direct sales force initially targeting large commercial dairy operations, and potentially in conjunction with regional distribution partners, can be effective in reaching this market. We plan to establish an active ongoing industry education and outreach program. We expect to publish our clinical data in peer reviewed journals and to present at conferences attended by members of the dairy industry.

We also plan to explore international expansion opportunities for Neonorm Calf where appropriate. We recently 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.

Neonorm Line Extensions

We believe that due to Neonorm's mechanism of action and our data in preweaned dairy calves, we will be able to develop and commercialize species-specific formulations of Neonorm for the estimated approximately 22 million beef calves in the United States, and multiple other animal species, such as horses, goats and sheep. Published sources indicate that approximately 2.4% of beef calves younger than three weeks old suffer from diarrhea. We believe 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 we intend to work to extend the reach of Neonorm and line extension products.

We are planning studies of an equine formulation of Neonorm both for foals that have not been weaned and that are experiencing watery diarrhea, as well as 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. There are no anti-secretory products approved by the FDA for veterinary use.

Other Product Candidates and Development

We have planned multiple clinical studies over the next 12 to 18 months, to expand Canalevia and Neonorm to additional species. We believe that we will be successful because:

- we have existing safety and efficacy data for our 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, we plan to initiate clinical studies for Virend and NP-500 in 2016 and beyond, both of which 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. We are currently developing species-specific formulations of NP-500 to treat obesity-related metabolic dysfunction in 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 hypertriglyceridaemia. 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.

We anticipate that our development activities will benefit from centralized activities, including shared use of the manufacturing and regulatory documentation for chemistry, manufacturing and controls, or CMC. We also anticipate being able to enter into combined clinical research agreements and activities with companion animal clinical trial sites for dogs and cats.

Sales and Distribution

In September 2014, we 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. We expect to launch Canalevia in 2016. We intend to establish a focused direct sales force for both the production and companion animal markets, and we have already hired our first sales representative for Neonorm Calf. We will focus our sales and marketing 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 targets for companion animals. In August 2014, we entered into our first regional distribution agreement for the Upper Midwest region, and in September 2014, entered into an agreement with a national master distributor, who also distributes prescription products for the companion animal market. In February 2015, we entered into 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. Biotenesis Bagó recently won "Best Animal Health Company in Latin/South America," awarded by Animal Pharm publication. Our 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, we can terminate the agreement if Biogenesis Bagó fails to meet annual sales goals for each year of the five-year agreement, and we may revoke exclusivity if Biogenesis Bagó fails to meet guaranteed minimum sales. We also agreed to additional incentive payments if stretch goals are exceeded.

We plan to partner with other leading distributors to deliver our products to customers both in the United States and internationally, and may also explore entering into partnerships that include payment of upfront licensing fees for our products and product candidates for markets outside the United States where appropriate. For example, we recently entered into a non-binding letter of intent with Dechra Pharmaceuticals PLC, pursuant to which we agreed to negotiate a licensing agreement for rights to commercialize our leading prescription drug product candidate, Canalevia, for dogs in the European Union. We expect that our 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. We believe this overall approach is scalable and transferable as we expand our commercialization efforts, as well as when we further expand 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. Our collaborating suppliers obtain CPL and arrange for the shipment of CPL to our third party contract manufacturer. CPL will also be shipped to us for manufacturing after we establish our own API manufacturing capability.

Our third-party contract manufacturer will process CPL into both crofelemer, the API in Canalevia, and the botanical extract used in Neonorm. 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 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 we believe these third parties have developed their own proprietary manufacturing specifications pursuant to their license agreements, such third-party intellectual property is unknown to us, is not licensed to us pursuant to the Napo License Agreement, and is not part of the intellectual property

that we intend to use for the manufacture of API in our 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 Fulyzaq. In May 2014 and June 2014, and as amended in February 2015, we 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. We have 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. Although we have not yet entered into the commercial supply agreement, we currently have a quantity of the botanical extract in Neonorm, that we believe is sufficient to meet or exceed expected volume requirements for approximately 12 months following our recent commercial launch of Neonorm. Indena S.p.A. has agreed to supply us with two pilot lots (approximately 60 kg) of botanical extract, as well as the API in Canalevia (approximately 3 kg) and data to support our anticipated regulatory filings.

Pursuant to the memorandums of understanding, we agreed to pay Indena S.p.A. the following fees in connection with the establishment of our manufacturing arrangement:

- a start-up fee equal to €500,000, payable in two equal installments, both of which will be payable by the end of March 2015;
- fees associated with the technology transfer and manufacturing process adaptation equal to (i) €430,000 for API and (ii) €190,000 for the botanical extract, each of which are payable in two equal installments, the first of which have already been paid, and the second of which are payable by the end of March 2015 (for API), and by the end of June 2015 (for botanical extract);
- fees for the designed and set up of a dedicated suite qualified for pharmaceutical and veterinary products equal to €170,000, €150,000 of which is payable by the end of March 2015, and €20,000 of which is payable by the end of June 2015;
- deliverables fees equal to €500,000, €250,000 of which is payable by the end of March 2015, and €250,000 of which is payable by the end of June 2015; 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 is due by the end of March 2015, with the remainder paid by the end of December 2015.

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 this offering. We expect to use a portion of the proceeds of this offering for payment of these fees. In June 2014, as contemplated by the memorandums of understanding, we also issued Indena S.p.A. a warrant to acquire 16,666 shares our common stock at an exercise price per share equal to 90% of the initial public offering price, which expires in June 2019.

Utilizing proceeds from this offering, we intend to supplement our contract manufacturing capability with a relationship with Glenmark as an additional source of crofelemer, and have entered into a non-binding letter of intent to formalize this arrangement.

We also plan to enter into agreements with third parties for the formulation of the API and botanical extracts into finished products to be used for planned studies and commercialization.

The facilities of our third-party contract manufacturers that will manufacture our API and botanical extract, as well as formulate our 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 stand alone 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 Limited, 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. We believe that the large human pharmaceutical companies may also decide to spin out their animal health subsidiaries into stand alone companies.

Although there are currently no FDA-approved anti-secretory products to treat watery diarrhea in dogs, we anticipate that Canalevia, if approved, will face competition from various products, including products approved for use in humans that are used extra-label in animals. We are aware that veterinarians typically treat watery 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 watery diarrhea. We are not aware of any veterinarians prescribing Fulyzaq extra-label for use in dogs, and the indication of Fulyzaq 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 Fulyzaq 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 our 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 our products and product candidates may achieve.

Intellectual Property

Napo License Agreement

In January 2014, we entered into the Napo License Agreement, which we amended and restated in August 2014 and further amended in January 2015, pursuant to which we 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 Napo and Glenmark Pharmaceuticals, Ltd., the manufacturer of the API in Fulyzaq. Under the Napo License Agreement, Napo also assigned to us certain raw materials and equipment and granted us 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, we are responsible for, and shall ensure, the development and commercialization of products that contains 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, we are 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 we signed with Napo. We 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 our 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

Pursuant to the Napo License Agreement, if this offering is not completed before December 31, 2015 or if we do not receive net proceeds of at least $10.0 million from this offering, we may owe Napo (x) milestone payments of up to $3.0 million per Product derived from *Croton lechleri* and milestone payments of up to $150,000 per non-*Croton lechleri* Product, (y) an 8% royalty on cumulative annual net sales of all such Products derived from *Croton lechleri* up to a specified amount of net sales and a 10% royalty on cumulative annual net sales of all such Products above such specified amount of net sales, and (z) a 2% royalty on annual net sales of all non-*Croton lechleri* Products that are prescription drugs approved by the FDA or the equivalent regulatory agency in another country, and a 1% royalty on annual net sales of non-prescription non-*Croton lechleri* Products that do not require pre-marketing approval from the FDA or the equivalent regulatory agency in another country. If this offering closes before such milestones are achieved or such sales occur and before December 31, 2015 and we receive net proceeds of at least $10.0 million from this offering, we will not owe Napo such milestone payments or such royalties on non-*Croton lechleri* Products and for Products derived from *Croton lechleri*, we 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. At our sole discretion, we may elect to remit any milestone payments and/or royalties in the form of our 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 we owe 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 we 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 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, we own all rights, title and interest in our intellectual property and any joint intellectual property developed under the license. We granted Napo a non-exclusive, paid-up, irrevocable worldwide license to our 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. We 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 our gross negligence or willful misconduct, breach of our 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 us, our affiliates, and our 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.

We 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 our uncured material breach or bankruptcy after certain notification periods.

Patent Portfolio

Under the Napo License Agreement, we have 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.* (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 February 4, 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). 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.

The patents and patent applications we licensed from Napo, or the Napo Patents, are also licensed by Napo to Salix Pharmaceuticals, Inc., or Salix, for certain fields of human use. Under the terms of the collaboration agreement between Salix and Napo, or the Salix Collaboration Agreement, Napo and Salix have agreed on who has the first right and responsibility to file, prosecute and maintain the Napo Patents. As a result, under the Napo License Agreement, we only have the right to maintain any issued patents within the Napo Patents that are not maintained in accordance with the rights and responsibilities of the parties under the Salix Collaboration Agreement. US 7,323,195; US 7,341,744; and US 8,574,634 are issued Napo Patents. Salix has licensed rights only to human use in certain territories and for certain indications, and currently markets crofelemer (Fulyzaq) for human use and has listed US 7,323,195; US 7,341,744; and US 8,574,634 in the FDA's Orange Book for Fulyzaq. We rely on these issued Napo Patents as intellectual

property protection for our veterinary 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. Similarly, under the Salix Collaboration Agreement, Napo and Salix agreed on who has the first right to enforce the Napo Patents against potential infringers, even in our field of use. In addition, as between Napo and us, Napo has the first right to enforce the Napo Patents against potential infringers. If we are not the party who enforces the Napo Patents, we 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.

We have filed eleven provisional patent applications in the United States 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 gastric and colonic 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. 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.

Trademarks

We plan to market our products under a trademark or trademarks we select and we 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 we intend to seek approval, where necessary, to market and subsequently sell our prescription drug and non-prescription products. To comply with these regulatory requirements, we are establishing processes and resources to provide oversight of the development, approval processes and launch of our products and to position those products in order to gain market share in each respective market.

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-prescription products, regulate the marketing and advertising claims being made.

The approval of prescription drugs intended for animal use is regulated by the FDA, 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. We, as the sponsor of a novel drug candidates commence the development and approval process by initiating communication with the ONADE and opening an INAD file. As part of this process, we 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), we, 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, a human food safety study. This food study is only required for drugs intended for use in production animals, and we currently have 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 we employ 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 we have 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.

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 which 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). In order to be considered a MUMS product, the drug sponsor must seek the MUMS designation by working with the CVM. 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 the Office of Minor Use Minor Species. Once a drug has received a MUMS designation, the drug sponsor may seek conditional approval of the drug product. MUMS is a designation that is requested by the applicant to the CVM for drug products where the intended use fits within MUMS designation. We believe that we qualify 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. Once designation has been granted, then the company must

submit safety and acceptable evidence of efficacy data as well as CMC data similar to the requirements for an NADA. However, with a MUMS product, in order to encourage development of MUMS drugs, the FDA allows interspecies data extrapolation in order to minimize the amount of new research needed to support efficacy and safety. After the filing of an NADA and the review of the application, the FDA through the CVM can then grant a conditional approval. This approval allows for the commercialization of the product, while collecting the remaining efficacy data required for a non-conditional approval of the drug. The sponsor has up to five years to collect this efficacy data. Following submission, review and approval of the pivotal field effectiveness study, the FDA may grant a full NADA approval. 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 designated new animal drug receives a seven-year marketing exclusivity.

Protocol Concurrence

We intend to seek protocol concurrences with the FDA for the planned pivotal trial of Canalevia that we plan to conduct for general watery diarrhea in dogs and for future pivotal trials in other indications. 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 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 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 we 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

We are currently planning on seeking MUMS designation for our prescription drug products and if we receive such a designation, we are entitled to a seven-year marketing exclusivity, which means that we will face no competition from another sponsor marketing the same drug in the same dosage form for the same intended use. If we were to lose such designation or not receive such designation but our application as a New Animal Drug is found to be a new chemical entity that meets the criteria described by the FDA, we 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 our application that our NADA contains an API not previously approved in another application, that the application itself is an original application, not a supplemental application, and that our application included the following studies: one or more investigations to demonstrate substantial evidence of effectiveness of the drug for which we are seeking approval; animal safety studies and human food safety studies (where applicable). If the NADA is seeking approval of a drug for which we have received conditional approval, we, upon approval would still be entitled to a five-year marketing exclusivity provided it meets the criteria as set forth above. If however, our 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, we 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.

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, we 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. We will conduct a review of advertising and promotional material for compliance with the local and regional requirements in the markets where we eventually may sell our product candidates.

Our 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

We believe regulatory rules relating to human food safety, food additives, or drug residues in food will not apply to the products we currently are developing because our 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 our 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.

Our 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 our 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.

We do not believe that our 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. Our non-prescription products are not added to food, are not ingredients in food nor are they added to any animal's drinking water. Therefore, our 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 our 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. We do not believe that our 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. Our 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. Our non-prescription products are intended to support a healthy gut and normalize stool formation in animals suffering from scours. Additionally, because a previously marketed human formulation of the botanical extract in our non-prescription products was considered a dietary supplement subject to DSHEA (and not regulated as a drug by the FDA), we do not believe that the FDA would regulate the animal formulation used in our non-prescription products in a different manner. We do not believe that our 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, we may be subject to state, federal and foreign healthcare and/or veterinary medicine laws, including but not limited to anti-kickback laws, as we may from time to time enter consulting and other financial arrangements with veterinarians, who may prescribe or recommend our products. If our financial relationships with veterinarians are found to be in violation of such laws that apply to us, we may be subject to penalties.

Employees

As of March 31, 2015, we had 17 employees. Of our employees, five hold D.V.M. or Ph.D. degrees and eight of our employees are engaged in research and development activities. None of our employees are represented by labor unions or covered by collective bargaining agreements.

Description of Properties

Our corporate headquarters are located in San Francisco, California, where we rent approximately 3,125 square feet of office space from Napo. Napo's lease agreement expires in June 2015. In June 2014, Napo assigned the lease to our company. We believe that our existing facilities are adequate for our near-term needs. We believe that suitable additional or alternative space would be available if required in the future on commercially reasonable terms if we are not able to renew our current lease on commercially reasonable terms.

Legal Proceedings

From time to time, we may become involved in litigation relating to claims arising from the ordinary course of business. There are currently no claims or actions pending against us, the ultimate disposition of which could have a material adverse effect on our results of operations, financial condition or cash flows.

MANAGEMENT

The following table lists our executive officers and directors and their respective ages and positions as of March 31, 2015:

Name	Age	Position
Lisa A. Conte	56	Chief Executive Officer, President and Director
Steven R. King, Ph.D.	57	Executive Vice President, Sustainable Supply, Ethnobotanical Research and Intellectual Property and Secretary
Michael L. Hauser, D.V.M.	62	Chief Veterinarian, Clinical Operations
John A. Kallassy	50	Executive Vice President, Chief Financial Officer, Chief Operating Officer and Treasurer
James J. Bochnowski(1)(2)(3)	71	Chairman of the Board of Directors
Jiahao Qiu(1)(3)	29	Director
Zhi Yang, Ph.D.(1)(2)	59	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 our President, Chief Executive Officer and a member of our 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 Pharmaceutical'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. 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.

We believe Ms. Conte is qualified to serve on our board of directors due to her extensive knowledge of our company and experience with our 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 our Executive Vice President of Sustainable Supply, Ethnobotanical Research and Intellectual Property since March 2014 and as our 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.

Michael L. Hauser, D.V.M. Dr. Hauser has served as our Chief Veterinarian, Clinical Operations since January 2015. From 1984 until present, Dr. Hauser has been in private equine practice focusing on thoroughbred performance horses on a global basis. He established and developed various veterinary/

medical initiatives worldwide and served as director of the Dubai Equine Hospital. Dr. Hauser has held executive management and research roles at various levels with global public health initiatives, including an initiative affiliated with Imperial College London, where he has held the position of Honorary Senior Guest Lecturer since 2009, and Onehealth Foundation, which he founded in 2010 and for which he has served as Founder, Chief Veterinary Advisor, and Chairman of the Board since that time. Dr. Hauser holds both a D.V.M. and an M.S. in Immunopathology from Washington State University.

John A. Kallassy. Mr. Kallassy has served as our Executive Vice President and Chief Operating Officer since February 2014, and also as our Chief Financial Officer and Treasurer since September 2014. From 2012 to 2014, Mr. Kallassy was the President and co-founder of I-Bankers Direct, LLC, an investment bank and currently serves on its board of directors. From 2005 to 2011, Mr. Kallassy was the Chief Executive Officer of Zargis Medical Corp., a medical device company, whose assets were acquired by 3M Company in 2011, and as Chief Financial Officer of Speedus Corp., a then-NASDAQ listed affiliate of Zargis Medical Corp. Mr. Kallassy holds an M.B.A. from Cornell University and a B.S. in Biology from the State University of New York at Brockport.

Non-Employee Directors

James J. Bochnowski. Mr. Bochnowski has served as a member of our board of directors since February 2014 and as Chairman of our 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.

We believe Mr. Bochnowski is qualified to serve on our 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 our board of directors since February 2014. 2010, 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.

We believe Mr. Qiu is qualified to serve on our 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 our board of directors since February 2014. Since 2005, Dr. Yang has served as the Chairman, Managing Partner and Founder of BioVeda 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.

We believe Dr. Yang is qualified to serve on our board of directors due to his significant experience as a founder, investor and member of the board of directors of numerous life sciences companies, as well as his life sciences background and education.

Family Relationships

There are no family relationships among any of our directors or executive officers.

Corporate Governance

Board Composition and Risk Oversight

Our business and affairs are managed under the direction of our board of directors, which currently consists of four members. Certain members of our board of directors were elected pursuant to the provisions of a voting agreement among certain of our major stockholders, as amended. See "Certain Relationships and Related Persons Transactions—Voting Agreement" for more information regarding the voting agreement.

Our board of directors consists of four members. Three of the four directors that will comprise our board of directors upon the closing of this offering are independent within the meaning of the independent director rules of the NASDAQ Stock Market, LLC, or NASDAQ. All of the current directors were initially elected to our board of directors pursuant to a voting agreement that will terminate automatically by its terms upon the closing of this offering, or appointed by the then members of the board.

Upon closing of this offering, our board of directors will be divided into three classes of directors. At each annual 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 annual meeting of stockholders to be held during the years 2016 for the Class I directors, 2017 for the Class II directors and 2018 for the Class III directors.

The Class I directors will be Ms. Conte and Mr. Bochnowski.

The Class II director will be Mr. Qiu.

The Class III director will be Dr. Yang.

We expect 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 our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

Our board of directors has an active role, as a whole and when it establishes committees, will at the committee level, in overseeing the management of our risks. Our board of directors is responsible for general oversight of risks and regular review of information regarding our risks, including credit risks, liquidity risks and operational risks. Our compensation and nominating committees will be responsible for overseeing the management of risks relating to our executive compensation plans and arrangements and the risks associated with the independence of our board of directors and potential conflicts of interest. Our audit committee will be responsible for overseeing the management of our risks relating to accounting matters and financial reporting. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, our entire board of directors will be regularly informed through discussions from committee members about such risks. Our board of directors believes its administration of risk oversight function has not affected our board of directors' leadership structure.

Director Independence

Upon the closing of this offering, we anticipate that our common stock will be listed on The NASDAQ Capital Market. Under the NASDAQ rules, independent directors must comprise a majority of a listed company's board of directors within a specified period of the closing of this offering. 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.

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, our 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 July 2014, our board of directors undertook a review of its composition, the composition of its committees and the independence of our directors and considered whether any director has a material relationship with us 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, our board of directors has determined that three of our four directors that will be seated upon the closing of this offering does 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. Our board of directors also determined that Mr. Bochnowski (chairperson), Mr. Qiu and Dr. Yang, who will comprise our audit committee, and Mr. Bochnowski (chairperson) and Dr. Yang, who will comprise our compensation committee and Mr. Bochnowski (chairperson) and Mr. Qiu, who will comprise our 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, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances our board of directors deemed relevant in determining independence, including the beneficial ownership of our capital stock by each non-employee director.

Board Committees

In connection with this offering, our board of directors will establish an audit committee, a compensation committee and a nominating committee.

Audit Committee

The members of our audit committee will be Mr. Bochnowski, Mr. Qiu and Dr. Yang. Mr. Bochnowski will be the chairperson of the audit committee. Our audit committee's responsibilities will include:

- appointing, approving the compensation of, and assessing the independence of our registered public accounting firm;
- overseeing the work of our independent registered public accounting firm, including through the receipt and consideration of reports from that firm;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures;
- monitoring our internal control over financial reporting, disclosure controls and procedures and code of conduct;
- discussing our risk management policies;
- establishing policies regarding hiring employees from our 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.

All audit and non-audit services, other than *de minimis* non-audit services, to be provided to us by our independent registered public accounting firm must be approved in advance by our audit committee.

Our board of directors has determined that each of Mr. Bochnowski, Mr. Qiu and Dr. Yang is an independent director under NASDAQ rules and under Rule 10A-3. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and NASDAQ. Our board of directors has determined that Mr. Bochnowski 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.

Compensation Committee

The members of our compensation committee will be Mr. Bochnowski and Dr. Yang. Mr. Bochnowski will be the chairperson of the compensation committee. Our compensation committee's responsibilities will include:

- determining, or making recommendations to our board of directors with respect to, the compensation of our Chief Executive Officer;
- determining, or making recommendations to our board of directors with respect to, the compensation of our other executive officers;
- overseeing and administering our cash and equity incentive plans;
- reviewing and making recommendations to our board of directors with respect to director compensation;
- reviewing and discussing at least annually with management our "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 our annual proxy statement in accordance with applicable SEC rules.

Our board has determined that each of Mr. Bochnowski and Dr. Yang 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.

Nominating Committee

The members of our nominating committee will be Mr. Bochnowski and Mr. Qiu. Mr. Bochnowski will be the chairperson of the nominating committee. Our nominating committee's responsibilities will include:

- identifying individuals qualified to become members of our board of directors;
- evaluating qualifications of directors;
- recommending to our board of directors the persons to be nominated for election as directors and to each of the committees of our board of directors; and
- overseeing an annual evaluation of our board of directors.

Code of Ethics and Conduct

We have adopted a written code of ethics and conduct that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer

or controller, or persons performing similar functions that will become effective upon the closing of this offering. Following the closing of this offering, a current copy of the code will be available on our website at *www.jaguaranimalhealth.com*. We intend to disclose future amendments to certain provisions of our code of business conduct and ethics, or waivers of such provisions on our website to the extent required by applicable rules and exchange requirements. The inclusion of our website address in this prospectus does not incorporate by reference the information on or accessible through our website into this prospectus.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has ever been an officer or employee of our company. None of our 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 our board of directors or compensation committee.

Limitation of Liability and Indemnification

Our amended and restated certificate of incorporation and amended and restated bylaws that will become effective upon the closing of this offering contain provisions that limit the personal liability of our 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 us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our 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.

Our amended and restated certificate of incorporation that will become effective upon the closing of this offering provides that we indemnify our directors to the fullest extent permitted by Delaware law. In addition, our amended and restated bylaws that will become effective prior to the closing of this offering, provide that we indemnify our directors and officers to the fullest extent permitted by Delaware law. Our amended and restated bylaws that will become effective upon the closing of this offering also provide that we shall advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding, and permit us 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 we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by our 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. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws that will become effective upon the closing of this offering, and our indemnification agreements, may discourage stockholders from bringing a lawsuit against

our directors for breach of their fiduciary duty of care. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Furthermore, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers. There is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

Board Leadership Structure

Our amended and restated bylaws and corporate governance guidelines provide our board of directors with flexibility in its discretion to combine or separate the positions of chairman of the board and chief executive officer. As a general policy, our board of directors believes that separation of the positions of chairman and chief executive officer reinforces the independence of the board of directors from management, creates an environment that encourages objective oversight of management's performance and enhances the effectiveness of the board of directors as a whole. We expect and intend the positions of chairman of the board and chief executive officer to be held by two individuals in the future.

Director Compensation

We currently do not pay our directors any cash compensation for their services on our board of directors. We intend to make annual equity grants to directors serving on our board who are not employees nor serving as designees of our investors, along with an additional equity grant to the chairman of our board of directors. We may in the future determine to make additional equity grants or pay other equity compensation for service on our board of directors.

In June 2014, we granted Mr. Bochnowski, our Chairman 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.

EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth the compensation for services paid in all capacities for the years ended December 31, 2014 and 2013 to our named executive officers. We did not pay any compensation to our named executive officers in 2013. In 2013, we paid Napo $394,866 for services provided by its employees, which includes services provided by our named executive officers, pursuant to the Service Agreement, in the amounts of $137,080 for Lisa A. Conte and $21,865 for Steven R. King. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Financial Operations Overview" for further information regarding the Service Agreement.

Name and principal position	Year	Salary ($)	Bonus ($)	Option awards ($)(1)	Stock awards ($)(2)	All other compensation ($)(3)	Total ($)
Lisa A. Conte	2014	$ 330,769		236,797	86,071	10,055	663,692
President and Chief Executive Officer	2013	0		0	0	0	0
Steven R. King, Ph.D.	2014	$ 210,865		160,383	50,208	18,226	439,682
Executive Vice President, Sustainable Supply, Ethnobotanical Research and Intellectual Property	2013	0		0	0	0	0
John A. Kallassy	2014	$ 181,731		118,398	43,035	19,207	362,371
Chief Financial Officer, Chief Operating Officer and Treasurer	2013	0		0	0	0	0

(1) Amounts shown in this column do not reflect dollar amounts actually received by our named executive officers. Instead, these amounts reflect the aggregate grant date fair value of each stock option granted computed in accordance with the provisions of FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 11 to our audited financial statements included in this prospectus. As required by SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions.

(2) Amounts shown in this column do not reflect dollar amounts actually received by our named executive officers. Instead, these amounts reflect the aggregate grant date fair value of restricted stock unit awards granted computed in accordance with the provisions of FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 11 to our audited financial statements included in this prospectus. As required by SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions.

(3) Amounts shown in this column reflect incremental health insurance premiums paid for such executive's family members.

Outstanding Equity Awards at Fiscal Year-End

The following table provides information regarding outstanding equity awards held by our named executive officers as of December 31, 2014.

Name	Options Vesting Commencement Date	Number of Securities Underlying Unexercised Options		Option Exercise Price	Option Expiration Date	Number of Securities Underlying Unexercisable RSUs(2)
		Exercisable	Unexercisable(1)			
Lisa A. Conte	04/01/2014	0	160,382	$ 2.54	04/01/2024	17,820
Steven R. King, Ph.D.	04/01/2014	0	93,556	$ 2.54	04/01/2024	10,395
John A. Kallassy	04/01/2014	0	80,390	$ 2.54	04/01/2024	8,910

(1) On January 1, 2015, 25% of each named executive officer's shares vested and became exercisable. The remainder of the shares are scheduled to vest in approximately equal monthly installments through April 1, 2017, subject to continued service with us through each relevant vesting date.

(2) Assuming the closing of this offering and compliance with the other terms of the RSU award agreement, 50% of the shares of common stock underlying the RSUs will vest and be issuable on January 1, 2016, and 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, we entered into an offer letter with Ms. Conte to serve as our 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, she is eligible for an annual target bonus of 30% of her base salary, and she is eligible to participate in the employee benefit plans that we offer to our other employees. 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% vests on January 1, 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 April 1, 2017. On June 2, 2014, Ms. Conte was granted 17,820 restricted stock units, or RSUs. Assuming the closing of this offering and compliance with the other terms of the RSU award agreement, 50% of the shares of common stock underlying the RSUs will vest and be issuable on January 1, 2016, and the remaining 50% will vest and be issuable on July 1, 2017. 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 us is terminated without cause within twelve months of the change in control.

Steven R. King, Ph.D.

In February 2014, we entered into an offer letter with Dr. King to serve as our 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 we offer to our other employees. 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% vests on January 1, 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 April 1, 2017. In June 2014, Dr. King was granted 10,395 RSUs. Assuming the closing of this offering and compliance with the other terms of the RSU award agreement, 50% of the shares of common stock underlying the RSUs will vest and be issuable on January 1, 2016, and the remaining 50% will vest and be issuable on July 1, 2017. 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, we entered into an offer letter with Mr. Kallassy to serve as our Executive Vice President and Chief Operating Officer, effective as upon the closing of our first sale of Series A preferred stock on February 5, 2014. Effective as of September 19, 2014, we entered into a new offer letter with Mr. Kallassy in connection with his appointment to serve as our 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 we offer to our other employees. 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% vests on January 1, 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 April 1, 2017. In June 2014, Mr. Kallassy was granted 8,910 RSUs. Assuming the closing of this offering and compliance with the other terms of the RSU award agreement, 50% of the shares of common stock underlying the RSUs will vest and be issuable on January 1, 2016, and the remaining 50% will vest and be issuable on July 1, 2017. We also agreed that Mr. Kallassy is 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 our board of directors. Accordingly, in February 2015, our board of directors granted Mr. Kallassy the additional 1,484 RSUs (which have the same terms as those granted in June 2014), and authorized the grant, effective upon this offering, of an option to purchase 13,365 shares of common stock at an exercise price equal to the initial public offering price. This option will have a 10-year term and vests as follows: 1/12 vests 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. In the event of a change in control, as defined in the 2013 Plan, the vesting of all outstanding awards granted to Mr. Kallassy under the 2013 Plan will accelerate if Mr. Kallassy's service with us is terminated without cause within twelve months of the change in control.

Michael L. Hauser, D.V.M.

In March 2015, we entered into an offer letter with Dr. Hauser to serve as our Chief Veterinarian, Clinical Operations, effective January 26, 2015, in an at-will capacity on a part-time basis (50%). Under the offer letter, Dr. Hauser's annual base salary is $33,000, he is eligible for an annual target bonus of up to 40% of his base salary, and will be eligible to participate in the employee benefit plans we offer to our other employees. Upon completion of this offering, Dr. Hauser's employment obligation will increase to 90% and his compensation will be subject to review. In February 2015, we approved the grant to Dr. Hauser, effective upon this offering, of a stock option to purchase 73,000 shares of common stock at an exercise price equal to the initial public offering price per share. The option has a 10-year term and is intended to vest as follows: 1/6 vests on February 26, 2015, one month after Dr. Hauser's start date, with the remainder vesting equally over the next five month such that the option is fully vested on July 26, 2015. Accordingly, the amount that is vested on the grant date, will depend on the timing of this offering.

Employee Benefit Plans

2014 Stock Incentive Plan

In July 2014, our board of directors adopted the Jaguar Animal Health, Inc. 2014 Stock Incentive Plan, or the 2014 Plan, and in July 2014, our stockholders approved the 2014 Plan. The 2014 Plan will be effective on the business day immediately before the effective date of the registration statement of which this prospectus forms a part. 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 have reserved 333,333 shares of our common stock for issuance pursuant to the 2014 Plan. In addition, the number of shares will automatically increase on January 1st of each year, for a period of not more than five years, beginning on January 1st of the year following the year in which the Plan became effective and ending no later than January 1, 2019, 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 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.

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

Our board of directors or one or more committees appointed by our board of directors will administer the 2014 Plan. 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 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 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. 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 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 has the authority to amend, suspend or terminate the 2014 Plan provided such action does not impair the existing rights of any participant.

2013 Equity Incentive Plan, as Amended

In November 2013, our board of directors adopted the 2013 Plan, effective November 1, 2013. The 2013 Plan was approved by our stockholders in November 2013. The 2013 Plan is intended to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of our company by offering them an opportunity to participate in our company's future performance through awards of options, restricted stock, RSUs and stock bonuses.

A total of 847,533 shares of common stock have been approved by the board of directors and our shareholders for issuance under the 2013 Plan. As of December 31, 2014, options to purchase 659,554 shares of our common stock and RSUs covering 68,902 shares were outstanding under the 2013 Plan. In February 2015, the board of directors granted 1,484 restricted stock unit awards under the 2013 Plan to an executive officer, and approved the grant of stock options to purchase 203,030 shares of common stock under the 2013 Plan, which grants are effective upon this offering with an exercise price equal to the initial public offering price to our executive officers and employees. The 2013 Plan will be terminated in connection with this offering, and accordingly, no shares will be available for issuance under the 2013 Plan following the completion of this offering and the grant of the contingent awards under the 2013 Plan. The 2013 Plan will continue to govern outstanding awards granted thereunder.

The 2013 Plan and outstanding stock awards will be administered by the compensation committee of our board of directors, or the committee, or our board of directors, acting as the committee. The committee has the authority to select grantees and set the terms of awards under the 2013 Plan, to construe and interpret the Plan and to make all other determinations necessary or advisable for the administration of the Plan. Grantees are selected in the discretion of the committee.

Awards under the Plan are evidenced by a written award agreement that contains the terms and conditions of the award. Awards granted under the 2013 Plan are generally not transferable other than by will or the laws of descent and distribution, or as otherwise provided in an award agreement.

The exercise price for options granted under the 2013 Plan may not be less than the fair market value of our common stock on the grant date. Under the 2013 Plan, fair market value will be determined by the board of directors in good faith.

In the event of certain corporate transactions, the vesting of outstanding stock awards under the 2013 Plan granted to non-executive employees will accelerate such that the stock awards are fully vested upon the corporate transaction.

Our board of directors may terminate the 2013 Plan at any time and also has the right to alter or amend the 2013 Plan or any part of the 2013 Plan from time to time. However, no change can be made to a granted option, if it would impair the rights of such grantee, without the consent of the grantee.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

The following includes a summary of transactions since inception, June 6, 2013, to which we have been a party in which the amount involved exceeded or will exceed $120,000 and in which any of our directors, executive officers or beneficial owners of more than 5% of our 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 our directors and executive officers are described elsewhere in this prospectus.

Transactions with Napo

Formation

We were founded in San Francisco, California as a Delaware corporation on June 6, 2013. Napo formed our company to develop and commercialize animal health products. In connection with our formation, we 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 our company pursuant to the Service Agreement discussed below. As of December 31, 2013, we were a wholly-owned subsidiary of Napo and as of December 31, 2014, we were a majority-owned subsidiary of Napo.

Napo Service Agreement

Effective July 1, 2013, we entered into an Employee Leasing and Overhead Allocation Agreement with Napo, or the Service Agreement. The term of the agreement was from July 1, 2013 through February 28, 2014. In connection with the Service Agreement, Napo provided us with the services of Napo employees and we agreed to pay Napo for a portion of Napo's overhead costs including rent. For additional information relating to the Service Agreement, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Financial Operations Overview."

Napo License Agreement

In January 2014, we entered into the Napo License Agreement, pursuant to the term sheet for which we paid Napo a $100,000 option fee, and agreed to make royalty and milestone payments to Napo based on sales of our products. Lisa A. Conte, our Chief Executive Officer, President and member of our board of directors is also the interim chief executive officer and serves on the board of directors of Napo. Ms. Conte intends to continue to act as interim chief executive officer of Napo until a suitable chief executive officer for Napo activities is recruited and approved by Napo's board of directors. For additional information relating to the Napo License Agreement, see "Business—Intellectual Property—Napo License."

In connection with the entry into certain financing arrangements in October 2014, which we refer to as 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 we are 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 us 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 our rights under the Napo License Agreement shall not be terminated unless we fail to make payments thereunder within the time periods required.

Napo Arrangements

Lease

Our corporate headquarters are located in San Francisco, California, where we rent approximately 3,125 square feet of office space. Since our formation in June 2013, we have shared premises with Napo pursuant to its lease. See "Napo Service Agreement" above. Since March 2014, we have made the rent payments under Napo's lease. The lease was assigned to us in June 2014 and expires 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 our board of directors and our executive officers. The column titled "Percentage of Shares Beneficially Owned" is based on a total of 108,452,786 shares of Napo common stock outstanding as of December 31, 2014.

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 that are currently exercisable or vested, or exercisable or subject to vesting within 60 days after December 31, 2014 are considered outstanding and beneficially owned by the person holding 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)	8,067,505	7.4%
Lisa A. Conte(2)	2,697,770	2.4%
Jiahao Qiu	—	—
Zhi Yang, Ph.D.(3)	2,151,174	2.0%
Steven R. King, Ph.D.(4)	797,175	*

* Less than 1%

(1) Includes (i) 7,522,051 shares of Napo common stock and (ii) warrants to purchase 545,454 shares of Napo common stock, all of which are held by the Bochnowski Family Trust. Mr. Bochnowski, a member of our 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) 981,122 shares of Napo common stock and (ii) a fully-vested option to purchase 1,716,648 shares of Napo common stock. In addition, Ms. Conte holds RSUs for an aggregate of 7,300,134 shares of Napo common stock (3,475,734 of which were issued prior to 2011; and 3,824,400 of which were issued post 2011). Ms. Conte, our Chief Executive Officer, President and a member of our 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 Mr. 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. Mr. Yang, a member of our board of directors, is the Chairman, Founder, Managing Partner and sole shareholder of BioVeda Management, Ltd., and may be deemed to beneficially own such shares.

(4) Includes (i) 337,460 shares of Napo common stock and (ii) a fully-vested option to purchase 459,715 shares of Napo common stock. In addition, 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 post 2011). Dr. King, our Executive Vice President of Sustainable Supply, Ethnobotanical Research and Intellectual Property, held an office in the same capacity at Napo.

Assuming satisfaction of the service requirements, Napo's RSU awards granted post 2011 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.

Financings

Note and Warrant Financings

In July 2013, pursuant to a note and warrant purchase agreement dated July 8, 2013, we issued a convertible promissory note in the aggregate principal amount of $100,000 and warrants to purchase 39,555 shares of common stock to Sichuan Biopharma, an entity affiliated with BioVeda Management, Ltd., or BVCF, a significant stockholder. Dr. Zhi Yang, a member of our board of directors, is the Chairman, Founder and Managing Partner of BVCF, and Mr. Jiahao Qiu, a member of our board of directors, is an employee of BVCF. In September 2013, we also issued a convertible promissory note in the aggregate principal amount of $250,000 and warrants to purchase 98,888 shares of common stock to the Bochnowski Family Trust pursuant to the same purchase agreement. Mr. Bochnowski, a member of our board of directors, is a co-trustee and beneficiary of the Bochnowski Family Trust. The warrants have an exercise price of $2.5281 per share and expire February 5, 2019, the fifth anniversary of the initial closing of the sale of Series A preferred stock. The warrants are outstanding and have not been exercised as of the date of this prospectus.

In January 2014, the noteholders acknowledged and agreed that all principal under the notes would convert in full into shares of common stock at $2.5281 per share immediately prior to the initial closing of the sale of Series A preferred stock and we subsequently issued 98,888 shares of common stock to the Bochnowski Family Trust and 39,555 shares of common stock to Sichuan Biopharma in February 2014.

In June 2014, pursuant to a convertible note purchase agreement, we 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 the Bochnowski Family Trust. Upon the closing of this offering, all of these convertible promissory notes will convert into shares of common stock at a conversion price equal to 80% of the initial public offering price per share. Such shares of common stock will be unregistered.

In December 2014, pursuant to a convertible note and warrant purchase agreement dated December 23, 2014, we 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 Bochnowski Family Trust. We later amended the terms of these notes in February 2015. In connection with the December 2014 issuance of the notes, we issued these accredited investors warrants to purchase that number of shares of common stock determined by dividing 50% of $650,000 principal amount by the exercise price. If this offering is consummated prior to June 30, 2015, the exercise price will be $5.60 per share (80% of the initial public offering price). If this offering has not been consummated by June 30, 2015, the exercise price will be $2.696 per share. In March 2015, the Bochnowski Family Trust irrevocably elected to have its $250,000 aggregate principal amount of notes automatically convert into shares of our common stock upon the closing of this offering. For additional information regarding the terms of these notes, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Description of Indebtedness" and Note 8 to our audited financial statements appearing elsewhere in this prospectus.

Series A Financing

In February 2014, we entered into a Series A preferred stock purchase Agreement with Kunlun Pharmaceuticals Ltd., or Kunlun, pursuant to which we issued 2,224,991 shares of Series A preferred stock at a price per share of $2.2472 for aggregate gross proceeds of $5.0 million. Kunlun is a wholly-owned subsidiary of BVCF. Dr. Zhi Yang, a member of our board of directors, is the Chairman, Founder and Managing Partner of BVCF. Mr. Jiahao Qiu, a member of our board of directors, is an employee of BVCF.

In April and May 2014, pursuant to a series of joinder agreements to the Series A preferred stock purchase agreement, we issued 790,911 shares of Series A preferred stock to eight accredited investors at a price per share of $2.2472 for aggregate gross proceeds of $1,777,338. The Bochnowski Family Trust purchased 222,499 shares of Series A preferred stock for $500,000. Mr. Bochnowski, a member of our board of directors, is a co-trustee and beneficiary of the Bochnowski Family Trust.

Each share of Series A preferred stock will convert into two-thirds of a share of common stock upon the closing of this offering.

Investors' Rights Agreement

In February 2014, we entered into an investors' rights agreement with the holders of Series A preferred stock. This agreement provides for certain rights relating to the registration of their shares of common stock issuable upon conversion of their Series A preferred stock, a right of first refusal to purchase future securities sold by us (which does not apply to this offering) and certain additional covenants made by us. The right of first refusal and certain additional covenants will terminate upon the closing of this offering. The registration rights will terminate upon the later to occur of (a) for any particular holder with registration rights, at such time following this offering when all securities held by that stockholder subject to registration rights may be sold pursuant to Rule 144 under the Securities Act of 1933, as amended, or the Securities Act, during any 90-day period, or (b) five years following the closing of this offering or a liquidation event. See "Description of Securities—Registration Rights" for additional information.

Voting Agreement

In February 2014, we entered into a voting agreement with the holders of Series A preferred stock and common stock. Pursuant to the voting agreement, the following directors were each elected to serve as members on our board of directors: Lisa A. Conte and James J. Bochnowski (as representatives of holders of common stock, as designated by a majority of common stockholders), and Zhi Yang and Jiahao Qiu (as representatives of the holders of Series A preferred stock).

The voting agreement will terminate upon the closing of this offering, and members previously elected to our board of directors pursuant to this agreement will continue to serve as directors until they resign, are removed or their successors are duly elected by holders of our common stock. The composition of our board of directors after this offering is described in more detail under "Management—Board of Directors and Executive Officers."

Right of First Refusal and Co-Sale Agreement

In February 2014, we entered into a right of first refusal and co-sale agreement with the holders of our Series A preferred stock and common stock. The right of first refusal, right of co-sale and certain additional covenants will terminate upon the closing of this offering.

Indemnification Agreements

We have entered into indemnification agreements with each of our directors, and intend to enter into such agreements with our officers prior to the closing of this offering. These agreements, among other

things, require us or will require us 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 in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person's services as a director.

Other Transactions

We have granted stock options and/or RSUs to our executive officers. For a description of these options and RSUs, see the section of this prospectus titled "Management—Executive Compensation." We have also granted stock options to certain members of our board of directors. For a description of these stock options, see the section of this prospectus titled "Management—Director Compensation."

Policies and Procedures for Related Person Transactions

Our board of directors has adopted a written related person transaction policy, to be effective upon the closing of this offering, 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 we were or are 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 us of a related person. In reviewing and approving any such transactions, our 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.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of February 28, 2015 by:

- each person, or group of affiliated persons, who is known by us to be the beneficial owner of more than 5% of our outstanding common stock;
- each of our directors;
- each of our executive officers; and
- all of our executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. Shares of our common stock subject to options, warrants or RSUs that are currently exercisable or vested, or exercisable or subject to vesting within 60 days after February 28, 2015 are considered outstanding and beneficially owned by the person holding the options, warrants, or RSUs 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. Except as otherwise noted, the persons and entities in this table have sole voting and investing power with respect to all of the shares of our common stock beneficially owned by them, subject to community property laws, where applicable. The information is not necessarily indicative of beneficial ownership for any other purpose, including for purposes of Section 13(d) and Section 13(g) of the Securities Act.

The column titled "Percentage of Shares Beneficially Owned—Before Offering" is based on a total of 5,259,923 shares of common stock outstanding as of February 28, 2015 and includes (i) the conversion of all outstanding shares of Series A preferred stock into 2,010,596 shares of common stock upon the closing of this offering and (ii) the conversion of $2,100,000 aggregate principal amount of outstanding convertible promissory notes into 374,997 shares of common stock, based on an initial public offering price of $7.00 per share, upon the closing of this offering. The total shares of common stock outstanding may be adjusted for the purpose of calculating the percentage ownership of a person that has options, warrants or RSUs that are currently exercisable or vested, or exercisable or subject to vesting within 60 days after February 28, 2015 but not for the purpose of recalculating the percentage ownership of any other person. The column titled "Percentage of Shares Beneficially Owned—After Offering" is based on 8,409,923 shares of common stock to be outstanding after this offering, and includes the 3,150,000 shares of common stock that we are selling in this offering.

Except as otherwise set forth below, the address of each beneficial owner listed in the table below is c/o Jaguar Animal Health, Inc., 185 Berry Street, Suite 1300, San Francisco, California 94107.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
5% Stockholders			
Napo Pharmaceuticals, Inc.(1)	2,666,666	50.7%	31.7%
Entities affiliated with BVCF(2)	1,562,436	29.5%	18.5%
Executive Officers and Directors			
James J. Bochnowski(3)	459,732	8.5%	5.4%
Lisa A. Conte(4)	53,461	1.0%	*
Jiahao Qiu	—	—	—
Zhi Yang, Ph.D.(5)	1,562,436	29.5%	18.5%
Steven R. King, Ph.D.(6)	31,185	*	*
Michael L. Hauser, D.V.M.	—	—	—
John A. Kallassy(7)	26,730	*	*
All executive officers and directors as a group (7 persons)(8)	2,133,544	38.5%	24.5%

* Less than 1%.

(1) Lisa A. Conte, our Chief Executive Officer, is the interim chief executive officer of Napo. Napo's five-person board of directors, consisting of Lisa A. Conte, Richard W. Fields, Joshua Mailman, Gregory Stock and Thomas Van Dyck, has ownership and control of the shares of common stock held by Napo. Certain members of our board of directors, as well as certain of our executive officers and employees beneficially own common stock in Napo. As a group, our executive officers and directors (7 persons total), collectively beneficially own 12.3% of the issued and outstanding common stock of Napo, including the Bochnowski Family Trust, which holds 7.4%. Mr. Bochnowski, a member of our 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 Persons Transactions—Napo Arrangements—Napo Beneficial Ownership."

(2) Includes (i) 1,483,326 shares of common stock directly held by Kunlun Pharmaceuticals, Ltd., and (ii) 39,555 shares of common stock 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) Includes (i) 327,576 shares of common stock, (ii) stock options to purchase 10,947 shares and (iii) warrants to purchase 121,209 shares of common stock. 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.

(4) Represents stock options.

(5) Represents 1,562,436 shares of common stock beneficially held by BVCF. Dr. Yang is the Chairman, Founder, Managing Partner and sole shareholder of BVCF and he may be deemed to beneficially own all the shares held by BVCF.

(6) Represents stock options.

(7) Represents stock options.

(8) See footnotes (2) - (7).

DESCRIPTION OF CAPITAL STOCK

General

The following is a summary of the rights of our common stock and preferred stock and of certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws, as they will be in effect upon the closing of this offering. This summary is not complete. For more detailed information, please see the amended and restated certificate of incorporation and amended and restated bylaws which are filed as exhibits to the registration statement of which this prospectus is a part.

Immediately upon the closing of this offering, our authorized capital stock will consist of 60,000,000 shares, all with a par value of $0.0001 per share, of which 50,000,000 shares are designated as common stock and 10,000,000 shares are designated as preferred stock.

Upon the closing of this offering, all the outstanding shares of Series A preferred stock will convert into an aggregate of 2,010,596 shares of common stock. Additionally, warrants to purchase an aggregate of 516,588 shares of common stock, if not exercised, will remain outstanding upon the closing of the offering, based on an initial public offering price of $7.00 per share.

Common Stock

Based on (i) 2,874,330 shares of common stock outstanding as of December 31, 2014; (ii) the conversion of all outstanding shares of Series A preferred stock into 2,010,596 shares of common stock upon the closing of this offering; (iii) the issuance of 374,997 shares of common stock upon the conversion of convertible promissory notes in the aggregate principal amount of $2,100,000 upon the closing of this offering at a conversion price equal to $5.60 per share, and which shares will be unregistered; and (v) no exercise of outstanding options or warrants, or issuance of shares upon vesting of RSUs or conversions of outstanding convertible promissory notes, there will be 5,259,923 shares of common stock outstanding upon the closing of this offering.

As of December 31, 2014, assuming the conversion of all outstanding shares of Series A preferred stock into common stock upon the closing of this offering, we had 11 record holders of common stock.

As of December 31, 2014, there were 207,664 shares of common stock subject to outstanding warrants with an exercise price of $2.5281 per share, 16,666 shares of common stock subject to an outstanding warrant with an exercise price of $6.30 per share and 269,938 shares of common stock subject to warrants with an exercise price of $5.60 per share. Subsequent to December 31, 2014, we issued warrants to purchase an aggregate of 111,605 shares of common stock with an exercise price of $5.60 per share.

As of December 31, 2014, there were outstanding options to purchase 659,554 shares of common stock with a weighted-average exercise price of $2.67 per share and outstanding RSUs for 68,902 shares of common stock. Subsequent to December 31, 2014, we granted RSUs for 1,484 shares of common stock, and authorized the grant of options to purchase 203,030 shares of common stock, which will be granted effective upon this offering with an exercise price equal to the initial public offering price.

Voting Rights

The holders of our common stock are entitled to one vote per share on all matters to be voted on by our stockholders. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of common stock are entitled to receive ratably such dividends as may be declared by our board of directors out of funds legally available for that purpose. In the event of our liquidation, dissolution or winding up, the holders of common stock are entitled to share ratably in all assets remaining after the payment of liabilities, subject to the prior distribution rights of preferred stock then outstanding. Holders of common stock have no preemptive, conversion or subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

Dividends

Subject to preferences that may be applicable to any outstanding preferred stock, holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds. For more information, see the section titled "Dividend Policy."

Liquidation

In the event of our liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Rights and Preferences

Holders of common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued pursuant to this offering, when paid for, will be fully paid and nonassessable.

Preferred Stock

Upon the closing of this offering, all outstanding shares of Series A preferred stock will convert into shares of common stock. Following the closing of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the number, rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and sinking fund terms, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control or other corporate action. We have no current plan to issue any shares of preferred stock.

Warrants

As of December 31, 2014, we had outstanding warrants to purchase an aggregate of 494,268 shares of common stock, 207,664 of which are exercisable at a price of $2.5281 per share, and expire on February 5, 2019; 16,666 of which are exercisable at a price of $6.30 per share, and expire June 26, 2019; 33,333 of which are exercisable at a price of $5.60 per share, and expire August 26, 2016; 178,570 of which are exercisable at a price of $5.60 per share and expire June 3, 2020; and 58,035 of which are exercisable at a price of $5.60 per share and expire December 31, 2017. Subsequent to December 31, 2014, we issued warrants to purchase 111,605 shares of our common stock at an exercise price of $5.60 per share and which expire December 31, 2017. These warrants, if not exercised, will remain outstanding following the closing of this offering.

Representative's Warrants

Please see "Underwriting—Representative's Warrants" for a description of the warrants we have agreed to issue to the representative of the underwriters in this offering, subject to the completion of the

offering. We expect to enter into a warrant agreement in respect of the Representative's Warrants prior to the closing of this offering.

Registration Rights

Pursuant to the investor rights agreement entered into in February 2014 described above under "—Investor Rights Agreement," the current holders of Series A preferred stock have certain registration rights with respect to their shares of common stock, including shares of common stock issuable upon conversion thereof and shares of common stock issued as a dividend or other distribution with respect to or in exchange for or in replacement of the foregoing shares, as described below.

Demand Registration Rights

If at any time beginning 180 days after this offering, the holders of at least 20% of the registrable securities request in writing that we effect a registration with respect to their shares in an offering with an anticipated aggregate offering price of at least $10.0 million, we may be required to register their shares. We are obligated to effect at most four registrations for the holders of registrable securities in response to these demand registration rights. If the holders requesting registration intend to distribute their shares by means of an underwriting, the managing underwriter of such offering will have the right to limit the numbers of shares to be underwritten for reasons related to the marketing of the shares.

Piggyback Registration Rights

If we propose to register any shares of our common stock under the Securities Act, subject to certain exceptions, the holders of registrable securities will be entitled to notice of the registration and to include their shares of registrable securities in the registration. If such demand is made by the holders of registrable securities, we must use commercially reasonable efforts to include such holders' shares in the registration. If our proposed registration involves an underwriting, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares.

Form S-3 Registration Rights

After this offering, if we become entitled under the Securities Act to register our shares on Form S-3 a holder of registrable securities requests in writing that we register their shares for public resale on Form S-3 in an offering with an anticipated aggregate offering price of at least $1.0 million, we will be required to use commercially reasonable efforts to effect such registration; provided, however, that we will not be required to effect such a registration if, within the preceding 12 months, we have already effected two registrations on Form S-3 for the holders of registrable securities.

Expenses

All expenses incurred in connection with the registration will be borne by us, except for if a demand registration is withdrawn under certain conditions. These expenses may include all registration and filing fees, printing expenses, fees and disbursements of our counsel, reasonable fees and disbursements of a counsel for the selling securityholders, blue sky fees and expenses and the expenses of any regular and special audits incident to the registration.

Termination of Registration Rights

The registration rights terminate upon the later of (i) with respect to the registration rights of an individual holder, when the holder can sell all of such holder's registrable securities in compliance with Rule 144 of the Securities Act within a ninety day period and (ii) five years after the effective date of the registration statement of which this prospectus is a part.

Anti-Takeover Effects of Delaware Law and Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Delaware Law

Certain provisions of Delaware law and our amended and restated certificate of incorporation and amended and restated bylaws that will become effective upon the closing of this offering contain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids. These provisions are also designed in part to encourage anyone seeking to acquire control of us to negotiate with our board of directors. We believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Our amended and restated certificate of incorporation and amended and restated bylaws to become effective in connection with this offering include provisions that:

- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- specify that special meetings of our stockholders can be called only by our board of directors, the chairman of our board of directors, the chief executive officer or the president;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- provide that directors may be removed only for cause;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;
- establish that our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered terms;
- specify that no stockholder is permitted to cumulate votes at any election of our board of directors; and
- require approval of the stockholders of at least 75% of the shares and a majority of the board of directors to amend certain of the above-mentioned provisions.

Exclusive Jurisdiction

Under the provisions of our amended and restated certificate of incorporation to become effective upon the closing of this offering, unless we consent in writing to the selection of 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 behalf of us; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees or agents to us or our stockholders; (iii) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law or our amended and restated certificate of incorporation or amended and restated bylaws; or (iv) any action asserting a claim against us governed by the internal affairs doctrine. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any action, a court could find the choice of forum

provisions contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in such action.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, our board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

- upon the closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not for determining the outstanding voting stock owned by the interested stockholder, (1) shares owned by persons who are directors and also officers, and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

- at or subsequent to the date of the transaction, the business combination is approved by our board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least $66^{2}/_{3}\%$ of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage business combinations or other attempts that might result in the payment of a premium over the market price for the shares of common stock held by our stockholders.

The provisions of Delaware law and our restated certificate of incorporation and amended and restated bylaws to become effective upon the closing of this offering could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company N.A. The transfer agent and registrar's address is 250 Royall St., Canton, MA 02021. The transfer agent's telephone number is (800) 962-4284.

Listing

Our common stock has been approved for listing on The NASDAQ Capital Market under the symbol "JAGX."

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock, and although our common stock has been approved for listing on The NASDAQ Capital Market, we cannot assure you that there will be an active public market for our common stock following this offering. We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. Future sales of substantial amounts of common stock in the public market, including shares issued upon exercise of outstanding options, or the perception that such sales may occur, however, could adversely affect the market price of our common stock and also could adversely affect our future ability to raise capital through the sale of our common stock or other equity-related securities at times and prices we believe appropriate.

Upon the closing of this offering, based on our shares outstanding as of December 31, 2014 and after giving effect to (i) the conversion of all outstanding shares of Series A preferred stock into an aggregate of 2,010,596 shares of common stock upon the closing of this offering; (ii) the conversion of $2,100,000 aggregate principal amount of outstanding convertible promissory notes into 374,997 shares of common stock at a conversion price of $5.60 per share; and (iii) the issuance of 3,150,000 shares of common stock being offered hereby, 8,409,923 shares of common stock will be outstanding. All of the shares of common stock to be sold in this offering will be freely tradable without restriction or further registration under the Securities Act unless held by our "affiliates," as that term is defined in Rule 144 under the Securities Act. The remaining outstanding shares of our common stock will be deemed "restricted securities" as that term is defined under Rule 144. Restricted securities may be sold in the public market only if their offer and sale is registered under the Securities Act or if the offer and sale of those securities qualify for an exemption from registration, including exemptions provided by Rules 144 and 701 under the Securities Act, which are summarized below.

As a result of the lock-up agreements and market stand-off provisions described below and the provisions of Rules 144 or 701, the shares of common stock that will be deemed "restricted securities" will be available for sale in the public market following the closing of this offering as follows:

- no shares will be eligible for sale on the date of this prospectus; and
- approximately 5,259,923 shares will be eligible for sale upon expiration of the lock-up agreements and market stand-off provisions described below, beginning more than 180 days after the date of this prospectus, subject in some cases to applicable volume limitations under Rule 144.

We may issue shares of common stock from time to time for a variety of corporate purposes, including in capital-raising activities through future public offerings or private placements, in connection with exercise of stock options, vesting of restricted stock units and other issuances relating to our employee benefit plans and as consideration for future acquisitions, investments or other purposes. The number of shares of common stock that we may issue may be significant, depending on the events surrounding such issuances. In some cases, the shares we issue may be freely tradable without restriction or further registration under the Securities Act; in other cases, we may grant registration rights covering the shares issued in connection with these issuances, in which case the holders of common stock will have the right, under certain circumstances, to cause us to register any resale of such shares to the public.

Lock-up Agreements

We and each of our directors and executive officers and holders of substantially all of our outstanding capital stock have agreed that, without the prior written consent of Aegis Capital Corp., on behalf of the underwriters, we and they will not, subject to limited exceptions that are described in "Underwriting" below, during the period ending 180 days after the date of this prospectus:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or

dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for common stock; or

- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our common stock,

whether any transaction described above is to be settled by delivery of our common stock or such other securities, in cash or otherwise.

Upon the expiration of the applicable lock-up periods, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above.

Rule 144

In general, under Rule 144, beginning 90 days after the date of this prospectus, a person who is not our affiliate and has not been our affiliate for purposes of the Securities Act at any time during the preceding three months will be entitled to sell any shares of common stock that such person has beneficially owned for at least six months, including the holding period of any prior owner other than one of our affiliates, subject only to the availability of current public information about us. Sales of common stock by any such person would be subject to the availability of current public information about us if the shares to be sold were beneficially owned by such person for less than one year.

In addition, under Rule 144, a person may sell shares of common stock acquired from us immediately upon the closing of this offering, without regard to the registration requirements of the Securities Act or the availability of public information about us, if:

- the person is not our affiliate and has not been our affiliate at any time during the preceding three months; and
- the person has beneficially owned the shares to be sold for at least one year, including the holding period of any prior owner other than one of our affiliates.

Beginning 90 days after the date of this prospectus, our affiliates who have beneficially owned shares of common stock for at least six months, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell within any three-month period a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately 84,099 shares immediately after this offering; and
- the average weekly trading volume in our common stock on The NASDAQ Capital Market during the four calendar weeks preceding the date of filing of a notice on Form 144 with respect to the sale.

Sales under Rule 144 by our affiliates are also subject to manner of sale provisions and notice requirements and to the availability of current public information about us. To the extent that shares were acquired from one of our affiliates, a person's holding period for the purpose of effecting a sale under Rule 144 would commence on the date of transfer from the affiliate.

Rule 701

In general, under Rule 701, any of an issuer's employees, directors, officers, consultants or advisors who purchases shares from the issuer in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of the issuer can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of the issuer can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

The Securities and Exchange Commission has indicated that Rule 701 will apply to typical stock options granted by an issuer before it becomes subject to the reporting requirements of the Exchange Act, along with the shares acquired upon exercise of such options, including exercises after an issuer becomes subject to the reporting requirements of the Exchange Act.

As of December 31, 2014, no shares of our outstanding common stock had been issued in reliance on Rule 701. If options are exercised or shares are issued upon the vesting of RSUs, any such shares will be subject to lock-up agreements as discussed above, and, as a result, these shares will only become eligible for sale at the earlier of the expiration of the lock-up period or upon obtaining the consent of Aegis Capital Corp., on behalf of the underwriters to release all or any portion of these shares from the lock-up agreements.

Equity Plan Awards

As of December 31, 2014, we had options to purchase 659,554 shares of common stock with a weighted-average exercise price of $2.67 per share and RSUs for 68,902 shares of common stock outstanding. Subsequent to December 31, 2014, we granted RSUs for 1,484 shares of common stock, and authorized the grant of options to purchase 203,030 shares of common stock, which will be granted effective upon this offering with an exercise price equal to the initial public offering price. We intend to file one or more registration statements on Form S-8 under the Securities Act to register the offer and sale of all shares of common stock subject to outstanding stock options and RSUs and all shares issuable under our stock plans. We expect to file the registration statement covering these shares after the date of this prospectus, which will permit the resale of such shares by persons who are non-affiliates of ours in the public market without restriction under the Securities Act, subject, with respect to certain of the shares, to the provisions of the lock-up agreements and market stand-off provisions described above.

Warrants

See "Description of Capital Stock—Warrants" for additional information. Such shares issued upon exercise of the warrants may be able to be sold after the expiration of the lock-up period described above subject to the requirements of Rule 144 described above.

Convertible Notes

See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Description of Indebtedness" for more information. Such shares issued upon conversion of outstanding convertible promissory notes may be able to be sold after expiration of the lock-up period described above subject to the requirements of Rule 144 described above.

Registration Rights

Upon the closing of this offering, the holders of approximately 5,184,652 shares of common stock, will be eligible to exercise certain rights to cause us to register their shares of common stock for resale under the Securities Act, subject to various conditions and limitations. These registration rights are described under the caption "Description of Capital Stock—Registration Rights." Upon the effectiveness of a registration statement covering these shares, the shares would become freely tradable without restriction under the Securities Act. If additional shares are issued to these holders upon exercise of warrants or conversion of notes, additional shares will be subject to registration rights.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS OF COMMON STOCK

The following is a general discussion of the material U.S. federal income tax consequences applicable to a non-U.S. holder (as defined below) with respect to the acquisition, ownership and disposition of our common stock. This discussion is limited to non-U.S. holders who purchase our common stock issued pursuant to this offering for cash and who hold our common stock as a "capital asset" within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended, or the Code (generally, property held for investment). This discussion is based upon the applicable provisions of the Code, applicable U.S. Treasury regulations promulgated thereunder, or the Treasury Regulations, and administrative and judicial interpretations thereof, promulgated thereunder, all as in effect on the date hereof, and all of which are subject to change, possibly on a retroactive basis. Any such changes could alter the tax consequences to non-U.S. holders described herein. This discussion is not a complete analysis of all of the potential U.S. federal income tax consequences applicable to a non-U.S. holder, and does not address all of the U.S. federal income tax consequences that may be relevant to a particular non-U.S. holder in light of such non-U.S. holder's particular circumstances or the U.S. federal income tax consequences applicable to non-U.S. holders that are subject to special rules, such as United States expatriates, banks, financial institutions, insurance companies, regulated investment companies, real estate investment trusts, controlled foreign corporations, passive foreign investment companies, corporations that accumulate earnings to avoid U.S. federal income tax, brokers, dealers or traders in securities, commodities or currencies, partnerships or other pass-through entities (or investors in such entities), tax-exempt organizations, tax-qualified retirement plans, persons subject to the alternative minimum tax, and non-U.S. holders that hold our common stock as part of a straddle, hedge, conversion transaction or other integrated investment. In addition, this discussion does not describe any state or local income, estate or other tax consequences of holding and disposing of our common stock.

As used in this discussion, the term "non-U.S. holder" means any beneficial owner of our common stock that is, for U.S. federal income tax purposes, neither a partnership nor any of the following:

- an individual citizen or resident of the United States;
- a corporation or other entity taxable as a corporation created or organized under the laws of the United States or any political subdivision thereof;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust if (i) a United States court is able to exercise primary supervision over the administration of the trust and one or more United States persons have authority to control all substantial decisions of the trust or (ii) the trust has a valid election in effect under applicable Treasury Regulations to be treated as a United States person.

If any entity classified as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in such partnership generally will depend on the status of the partner and the activities of the partnership. Partnerships and their partners should consult their tax advisors as to the tax consequences to them of the acquisition, ownership and disposition of our common stock.

THE FOLLOWING DISCUSSION IS FOR GENERAL INFORMATION ONLY AND IS NOT TAX ADVICE. PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL, STATE, LOCAL AND FOREIGN TAX CONSEQUENCES TO THEM OF THE ACQUISITION, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK.

Distributions on Common Stock

Distributions on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated first as a tax-free return of a capital to the extent of the non-U.S. holder's adjusted tax basis in the common stock below zero, and thereafter as capital gain, subject to the tax treatment described under "—Sale, Exchange or Other Disposition of Our Common Stock," below.

Subject to the discussions below regarding backup withholding and FATCA, the gross amount of dividends paid to a non-U.S. holder of our common stock that are not effectively connected with a U.S. trade or business conducted by such non-U.S. holder generally will be subject to U.S. federal withholding tax at a rate of 30%, or such lower rate specified by an applicable income tax treaty if we have received proper certification as to the application of such treaty. If a non-U.S. holder holds our common stock in connection with the conduct of a trade or business within the United States, and dividends paid on our common stock are effectively connected with such non-U.S. holder's U.S. trade or business (and, if under an applicable income tax treaty, such dividends are attributable to a permanent establishment or fixed base maintained by the non-U.S. holder within the United States), such non-U.S. holder generally will be subject to U.S. federal income tax at ordinary U.S. federal income tax rates (on a net income basis), and such dividends will not be subject to the U.S. federal withholding tax described above. In the case of a non-U.S. holder that is a corporation, such non-U.S. holder may also be subject to a 30% "branch profits tax" unless such corporate non-U.S. holder qualifies for a lower rate under an applicable income tax treaty.

In general, to claim the benefit of any applicable income tax treaty or an exemption from U.S. federal withholding because the income is effectively connected with the conduct of a trade or business within the United States, a non-U.S. holder must provide a properly executed Internal Revenue Service, or IRS, Form W-8BEN-E for treaty benefits or IRS Form W-8ECI for effectively connected income (or such successor form as the IRS designates), before the distributions are made. These forms must be updated periodically. If you are a non-U.S. holder, you may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. holders should consult their tax advisers regarding their entitlement to benefits under an applicable income tax treaty and the specific manner of claiming the benefits of such treaty.

Sale, Exchange or Other Disposition of Common Stock

Subject to the discussions below regarding backup withholding and FATCA, a non-U.S. holder generally will not be subject to U.S. federal income tax on any gain realized upon the sale, exchange or other disposition (collectively, a "disposition") of our common stock, unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business within the United States, and if an income tax treaty applies, is attributable to a permanent establishment maintained by the non-U.S. holder within the United States;
- the non-U.S. holder is an individual who is present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- we are or have been a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes at any time within the shorter of (i) the five-year period ending on the date of the disposition of our common stock or (ii) the non-U.S. holder's holding period for our common stock.

If the gain is described in the first bullet point above, the non-U.S. holder generally will be subject to U.S. federal income tax on a net income basis with respect to such gain in the same manner as if such non-U.S. holder were a United States person. In addition, if the non-U.S. holder is a corporation for U.S.

federal income tax purposes, such gain may be subject to a 30% branch profits tax unless such corporate non-U.S. holder qualifies for a lower rate under an applicable income tax treaty.

A non-U.S. holder described in the second bullet point above generally will be subject to U.S. federal income tax with respect to such gain at a flat 30% rate (or such lower rate specified by an applicable income tax treaty), which may be offset by U.S. source capital losses of the non-U.S. holder during the taxable year of disposition (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe that we are not currently, and we do not anticipate becoming, a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our other business assets and our non-U.S. real property interests, there can be no assurance that we will not become a USRPHC in the future. In general, a corporation is a USRPHC if the fair market value of its "United States real property interests" (as defined in the Code) equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests and its other assets used or held for use in a trade or business. Even if we are or become a USRPHC, a non-U.S. holder would not be subject to U.S. federal income tax on a sale, exchange or other taxable disposition of shares of our common stock by reason of our status as a USRPHC so long as (i) shares of our common stock continue to be regularly traded on an established securities market (within the meaning of Section 897(c)(3) of the Code) during the calendar year in which such disposition occurs and (ii) such non-U.S. holder does not own and is not deemed to own (directly, indirectly or constructively) more than 5% of the shares of our common stock at any time during the shorter of the five-year period ending on the date of the disposition of our common stock or the non-U.S. holder's holding period for our common stock. If gain on the disposition of our common stock were subject to taxation under the third bullet point above, the non-U.S. holder generally would be subject to U.S. federal income tax with respect to such gain in the same manner as gain that is effectively connected with the conduct of a U.S. trade or business (as described above), except that the branch profits tax generally would not apply.

Information Reporting and Backup Withholding

In general, a non-U.S. holder will be required to comply with certain certification procedures to establish that such holder is not a United States person in order to avoid backup withholding with respect to dividends or the proceeds from disposition of common stock. In addition, we are required to report annually to the IRS the amount of any dividends paid to a non-U.S. holder, regardless of whether we actually withheld any tax. Copies of the information returns reporting such dividends and the amount withheld may also be made available to the tax authorities in the country in which the non-U.S. holder resides under the provisions of an applicable income tax treaty.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a non-U.S. holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Foreign Accounts Tax Compliance Act

Under the Foreign Account Tax Compliance Act, as modified by Treasury Regulations and subject to any official interpretations thereof, any applicable intergovernmental agreement between the United States and a non-U.S. government to implement these rules and improve international tax compliance, or any fiscal or regulatory legislation or rules adopted pursuant to any such agreement (collectively, "FATCA"), after June 30, 2014, withholding at a rate of 30% will be required on dividends in respect of, and, after December 31, 2016, gross proceeds from the disposition of, our common stock held by or through certain foreign financial institutions (including investment funds), unless such institution enters

into an agreement with the Secretary of the Treasury to report, on an annual basis, information with respect to interests in, and accounts maintained by, the institution to the extent such interests or accounts are held by certain United States persons and by certain non-U.S. entities that are wholly or partially owned by United States persons and to withhold on certain payments. An intergovernmental agreement between the United States and an applicable foreign country, or future Treasury Regulations or other guidance, may modify these requirements. Accordingly, the entity through which our common stock is held will affect the determination of whether such withholding is required. Similarly, dividends in respect of, and gross proceeds from the sale of, our common stock held by an investor that is a non-financial non-U.S. entity that does not qualify under certain exemptions will be subject to withholding at a rate of 30%, unless such entity either (i) certifies to us that such entity does not have any "substantial United States owners" or (ii) provides certain information regarding the entity's "substantial United States owners," which we will provide to Secretary of the Treasury. We will not pay any additional amounts to holders in respect of any amounts withheld. Prospective investors are urged to consult their tax advisors regarding the possible implications of FATCA on their investment in our common stock.

UNDERWRITING

Aegis Capital Corp. is acting as the representative of the underwriters. We have entered into an underwriting agreement dated , 2015 with the representative. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to each underwriter named below and each underwriter named below has severally and not jointly agreed to purchase from us, at the public offering price per share less the underwriting discounts set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Underwriters	Number of Shares
Aegis Capital Corp.	
CRT Capital Group LLC	
Feltl and Company, Inc.	
Total	3,150,000

The underwriters are committed to purchase all the shares of common stock offered by us other than those covered by the option to purchase additional shares described below, if they purchase any shares. The obligations of the underwriters may be terminated upon the occurrence of certain events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the underwriters' obligations are subject to customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriters of officers' certificates and legal opinions.

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act of 1933, as amended, and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Over-allotment Option. We have granted the underwriters an over-allotment option. This option, which is exercisable for up to 45 days after the date of this prospectus, permits the underwriters to purchase a maximum of 472,500 additional shares (15% of the shares sold in this offering) from us to cover over-allotments, if any. If the underwriters exercise all or part of this option, they will purchase shares covered by the option at the public offering price per share that appears on the cover page of this prospectus, less the underwriting discount. If this option is exercised in full, the total offering price to the public will be $ and the total net proceeds, before expenses, to us will be $.

Discount. The following table shows the public offering price, underwriting discount and proceeds, before expenses, to us. The information assumes either no exercise or full exercise by the underwriters of their over-allotment option.

	Per Share	Total Without Over-allotment Option	Total With Over-allotment Option
Public offering price	$	$	$
Underwriting discount (7%)	$	$	$
Proceeds, before expenses, to us	$	$	$
Non-accountable expense allowance (1%)(1)	$	$	$

(1) The expense allowance of 1% is not payable with respect to the shares sold upon exercise of the underwriters' over-allotment option.

The underwriters propose to offer the shares offered by us to the public at the public offering price per share set forth on the cover of this prospectus. In addition, the underwriters may offer some of the shares to other securities dealers at such price less a concession of $ per share. After the initial offering, the public offering price and concession to dealers may be changed.

We have agreed to pay the underwriters' expenses relating to the offering, including (a) all filing fees and communication expenses relating to the registration of the shares of common stock to be sold in this offering (including any over-allotment shares); (b) all filing fees associated with the review of the offering by FINRA; (c) all fees and expenses relating to the listing of the shares on The NASDAQ Capital Market; (d) all fees, expenses and disbursements relating to background checks of our officers and directors in an aggregate amount not to exceed $12,500; (e) all fees, expenses and disbursements relating to the registration or qualification of the shares of common stock under the "blue sky" securities laws of such states and other jurisdictions as the representative may reasonably designate (including, without limitation, all filing and registration fees, and the reasonable fees and disbursements of "blue sky" counsel, it being agreed that such fees and expenses will be limited to: (i) if the offering is commenced on either the Nasdaq Global Market, Nasdaq Global Select Market, Nasdaq Capital Market or the NYSE Amex, the company will make a payment of $5,000 to such counsel at closing or (ii) if the offering is commenced on the Over the Counter Bulletin Board, the company will make a payment of $15,000 to such counsel upon the commencement of "blue sky" work by such counsel and an additional $5,000 at closing); (f) all fees, expenses and disbursements relating to the registration, qualification or exemption of the shares of common stock to be offered in this offering under the securities laws of such foreign jurisdictions as the representative may reasonably designate with our prior consent; (g) the costs of all mailing and printing of the underwriting documents (including, without limitation, the Underwriting Agreement, any blue sky surveys and, if appropriate, any agreement among underwriters, selected dealers' agreement, underwriters' questionnaire and power of attorney), registration statements, prospectuses and all amendments, supplements and exhibits thereto and as many preliminary and final prospectuses as the representative may reasonably deem necessary; (h) the costs and expenses of a public relations firm; (i) the costs of preparing, printing and delivering certificates representing the shares of common stock to be offered in this offering; (j) fees and expenses of the transfer agent for the common stock; (k) stock transfer and/or stamp taxes, if any, payable upon the transfer of securities from us to the representative; (l) the costs associated with the post-closing advertising of the offering if the national editions of the Wall Street Journal and New York times with our prior consent; (m) the costs associated with bound volumes of the public offering materials as well as commemorative mementos and lucite tombstones not to exceed $3,000, each of which we or our designee will provide within a reasonable time after the consummation of this offering in such quantities as the representative may reasonably request; (n) the fees and expenses of our accountants; (o) the fees and expenses of our legal counsel and other agents and representatives; (p) the reasonable and documented fees and expenses of the underwriter's legal counsel not to exceed $50,000, (q) the $25,000 cost associated with the use of Ipreo's book-building, prospectus tracking and compliance software for this offering; and (r) up to $20,000 of the representative's actual accountable "road show" expenses for the offering.

We estimate that the total expenses of the offering payable by us, excluding the total underwriting discount and non-accountable expense allowance, will be approximately $.

Lock-Up Agreements. We, our directors and executive officers and each of our other stockholders expect to enter into lock up agreements with the representative prior to the commencement of this offering pursuant to which each of these persons or entities, for a period of six (6) months from the effective date of the registration statement of which this prospectus is a part without the prior written consent of the representative, agree not to (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of our securities or any securities convertible into or exercisable or exchangeable for shares of our common stock owned or acquired on or prior to the closing date of this offering (including any shares of common stock acquired after the closing date of this offering

upon the conversion, exercise or exchange of such securities); (2) file or caused to be filed any registration statement relating to the offering of any shares of our capital stock; or (3) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock, whether any such transaction described in clause (1), (2) or (3) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, except for certain exceptions and limitations.

Representative's Warrants. We have agreed to issue to the representative warrants to purchase up to a total of shares of common stock (5% of the shares of common stock sold in this offering, excluding the over-allotment). The warrants will be exercisable at any time, and from time to time, in whole or in part, during the four-year period commencing one year from the effective date of the offering, which period shall not extend further than five years from the effective date of the offering in compliance with FINRA Rule 5110(f)(2)(H)(i). The warrants are exercisable at a per share price equal to $ per share, or 125% of the public offering price per share in the offering. The warrants have been deemed compensation by FINRA and are therefore subject to a 180 day lock-up pursuant to Rule 5110(g)(1) of FINRA. The representative (or permitted assignees under Rule 5110(g)(1)) will not sell, transfer, assign, pledge, or hypothecate these warrants or the securities underlying these warrants, nor will they engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the warrants or the underlying securities for a period of 180 days from the effective date of the offering. In addition, the warrants provide for registration rights upon request, in certain cases. In addition, the warrants provide for registration rights upon request, in certain cases. The demand registration right provided will not be greater than five years from the effective date of the offering in compliance with FINRA Rule 5110(f)(2)(H)(iv). The piggyback registration right provided will not be greater than seven years from the effective date of the offering in compliance with FINRA Rule 5110(f)(2)(H)(v). We will bear all fees and expenses attendant to registering the securities issuable on exercise of the warrants other than underwriting commissions incurred and payable by the holders. The exercise price and number of shares issuable upon exercise of the warrants may be adjusted in certain circumstances including in the event of a stock dividend, extraordinary cash dividend or our recapitalization, reorganization, merger or consolidation. However, the warrant exercise price or underlying shares will not be adjusted for issuances of shares of common stock at a price below the warrant exercise price.

Right of First Refusal. For a period of 12 months from the effective date of the offering, the representative has a right of first refusal to act as sole investment banker, sole-booking running manager and/or placement agent, at the representative's sole discretion, for each and every future public equity and public debt offerings during such 12-month period of our company or any successor to or any subsidiary of our company.

Electronic Offer, Sale and Distribution of Securities. A prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representative may agree to allocate a number of shares and warrants to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of, nor incorporated by reference into, this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Stabilization. In connection with this offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate-covering transactions, penalty bids and purchases to cover positions created by short sales.

Stabilizing transactions permit bids to purchase shares so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the shares while the offering is in progress.

Over-allotment transactions involve sales by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase. This creates a syndicate short position that may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriters may close out any short position by exercising their over-allotment option and/or purchasing shares in the open market.

Syndicate covering transactions involve purchases of shares in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared with the price at which they may purchase shares through exercise of the over-allotment option. If the underwriters sell more shares than could be covered by exercise of the over-allotment option and, therefore, have a naked short position, the position can be closed out only by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be downward pressure on the price of the shares in the open market that could adversely affect investors who purchase in the offering.

Penalty bids permit the representative to reclaim a selling concession from a syndicate member when the shares originally sold by that syndicate member are purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our shares or common stock or preventing or retarding a decline in the market price of our shares or common stock. As a result, the price of our common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on The NASDAQ Capital Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Passive market making. In connection with this offering, underwriters and selling group members may engage in passive market making transactions in our common stock on The NASDAQ Capital Market in accordance with Rule 103 of Regulation M under the Exchange Act, during a period before the commencement of offers or sales of the shares and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, then that bid must then be lowered when specified purchase limits are exceeded.

Certain Relationships

The underwriters and their affiliates have provided, or may in the future provide, various investment banking, commercial banking, financial advisory, brokerage and other services to us and our affiliates for which services they have received, and may in the future receive, customary fees and expense reimbursement.

In October 2014, we entered into a Standby Bridge Financing Agreement with 31 Group LLC, or 31 Group, and GPB Life Science Holdings, LLC, or GPB. On December 3, 2014, pursuant to the Standby Bridge Financing Agreement, which agreement was amended and restated, each of 31 Group and GPB purchased from us a $500,000 senior secured note dated December 3, 2014 and received warrants to purchase shares of our common stock. In March 2015, 31 Group assigned all rights title and interest in the $500,000 note and warrants to its members, including 50% of its interest in the note and warrants to

Riverside Merchant Partners LLC, or Riverside (formerly known as 15.5 Partners LLC), which is beneficially owned by certain persons, one or more of whom may be deemed control persons of the representative. In March 2015, Riverside subsequently sold its note to a third party in an arms-length transaction for a purchase price of $265,000, the aggregate principal amount of the note then owned by Riverside plus accrued interest thereon, but Riverside retained its warrants.

Also in March 2015, we agreed with the holders of warrants that the exercise price of the warrants would be initially fixed at $5.60 per share of our common stock, and the warrants would each be exercisable into an aggregate of 178,572 shares of our common stock, of which warrants to purchase 89,286 shares and 44,643 shares are held by GPB and Riverside, respectively. Of such warrants, warrants to purchase 50,893 shares of our common stock are beneficially owned by related persons of the representative and accordingly have been deemed compensation by FINRA and are therefore subject to a 180-day lock-up pursuant to Rule 5110(g)(1) of FINRA. The representative or its affiliates or associated persons will not sell, transfer, assign, pledge or hypothecate these warrants or the securities underlying these warrants, nor will they engage in any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the warrants or the underlying securities, for a period of 180 days from the effective date of the offering.

A Managing Director of the representative is a director of GBP.

In connection with the execution of the Standby Bridge Financing Agreement, we paid the representative a placement fee of $54,000.

The underwriters and their affiliates may, from time to time, engage in transactions with and perform services for us in the ordinary course of their business for which they may receive customary fees and reimbursement of expenses. In the ordinary course of their various business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own accounts and for the accounts of their customers and such investment and securities activities may involve securities and/or instruments of our company. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Although the foregoing transactions do not constitute a conflict of interest within the meaning of FINRA Rule 5121, Feltl and Company, Inc. has agreed to participate in the preparation of, and has exercised the usual standards of "due diligence" with respect to, the registration statement, and the prospectus and to undertake the legal responsibilities and liabilities of an underwriter under the Securities Act, specifically including those inherent in Section 11 of the Securities Act. We have agreed to indemnify Feltl and Company, Inc. against liabilities incurred in connection with this offering, including liabilities under the Securities Act.

The principal business address of Aegis Capital Corp. is 810 Seventh Avenue, 18th Floor, New York, New York 10019.

Offer Restrictions Outside the United States

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus

does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Australia

This prospectus is not a disclosure document under Chapter 6D of the Australian Corporations Act, has not been lodged with the Australian Securities and Investments Commission and does not purport to include the information required of a disclosure document under Chapter 6D of the Australian Corporations Act. Accordingly, (1) the offer of the securities under this prospectus is only made to persons to whom it is lawful to offer the securities without disclosure under Chapter 6D of the Australian Corporations Act under one or more exemptions set out in section 708 of the Australian Corporations Act, (2) this prospectus is made available in Australia only to those persons as set forth in clause (1) above, and (3) the offeree must be sent a notice stating in substance that by accepting this offer, the offeree represents that the offeree is such a person as set forth in clause (1) above, and, unless permitted under the Australian Corporations Act, agrees not to sell or offer for sale within Australia any of the securities sold to the offeree within 12 months after its transfer for the offeree under this prospectus.

China

The information in this document does not constitute a public offer of the securities, whether by way of sale or subscription, in the People's Republic of China (excluding, for purposes of this paragraph, Hong Kong Special Administrative Region, Macau Special Administrative Region and Taiwan). The securities may not be offered or sold directly or indirectly in the PRC to legal or natural persons other than directly to "qualified domestic institutional investors."

European Economic Area—Belgium, Germany, Luxembourg and the Netherlands

The information in this document has been prepared on the basis that all offers of common stock will be made pursuant to an exemption under the Directive 2003/71/EC ("Prospectus Directive"), as implemented in Member States of the European Economic Area (each, a "Relevant Member State"), from the requirement to produce a prospectus for offers of securities.

An offer to the public of common stock has not been made, and may not be made, in a Relevant Member State except pursuant to one of the following exemptions under the Prospectus Directive as implemented in that Relevant Member State:

- to legal entities that are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- to any legal entity that has two or more of (1) an average of at least 250 employees during its last fiscal year; (2) a total balance sheet of more than €43,000,000 (as shown on its last annual unconsolidated or consolidated financial statements) and (3) an annual net turnover of more than €50,000,000 (as shown on its last annual unconsolidated or consolidated financial statement);
- to fewer than 100 natural or legal persons (other than qualified investors within the meaning of Article 2(1)I of the Prospectus Directive) subject to obtaining the prior consent of the company or any underwriter for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of common stock shall result in a requirement for the publication by the company of a prospectus pursuant to Article 3 of the Prospectus Directive.

France

This document is not being distributed in the context of a public offering of financial securities (*offre au public de titres financiers*) in France within the meaning of Article L.411-1 of the French Monetary and Financial Code (*Code monétaire et financier*) and Articles 211-1 et seq. of the General Regulation of the French *Autorité des marchés financiers* ("AMF"). The common stock has not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France.

This document and any other offering material relating to the common stock has not been, and will not be, submitted to the AMF for approval in France and, accordingly, may not be distributed or caused to distributed, directly or indirectly, to the public in France.

Such offers, sales and distributions have been and shall only be made in France to (1) qualified investors (*investisseurs qualifiés*) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-1 to D.411-3, D. 744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation and/or (2) a restricted number of non-qualified investors (*cercle restreint d'investisseurs non-qualifiés*) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-4, D.744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation.

Pursuant to Article 211-3 of the General Regulation of the AMF, investors in France are informed that the common stock cannot be distributed (directly or indirectly) to the public by the investors otherwise than in accordance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 to L.621-8-3 of the French Monetary and Financial Code.

Ireland

The information in this document does not constitute a prospectus under any Irish laws or regulations and this document has not been filed with or approved by any Irish regulatory authority as the information has not been prepared in the context of a public offering of securities in Ireland within the meaning of the Irish Prospectus (Directive 2003/71/EC) Regulations 2005 (the "Prospectus Regulations"). The common stock has not been offered or sold, and will not be offered, sold or delivered directly or indirectly in Ireland by way of a public offering, except to (1) qualified investors as defined in Regulation 2(l) of the Prospectus Regulations and (2) fewer than 100 natural or legal persons who are not qualified investors.

Israel

The common stock offered by this prospectus have not been approved or disapproved by the Israeli Securities Authority (the ISA), or ISA, nor have such common stock been registered for sale in Israel. The shares and warrants may not be offered or sold, directly or indirectly, to the public in Israel, absent the publication of a prospectus. The ISA has not issued permits, approvals or licenses in connection with the offering or publishing the prospectus; nor has it authenticated the details included herein, confirmed their reliability or completeness, or rendered an opinion as to the quality of the common stock being offered. Any resale in Israel, directly or indirectly, to the public of the common stock offered by this prospectus is subject to restrictions on transferability and must be effected only in compliance with the Israeli securities laws and regulations.

Italy

The offering of the common stock in the Republic of Italy has not been authorized by the Italian Securities and Exchange Commission (*Commissione Nazionale per le Società e la Borsa*, "*CONSOB*") pursuant to the Italian securities legislation and, accordingly, no offering material relating to the common stock may be distributed in Italy and such securities may not be offered or sold in Italy in a public offer

within the meaning of Article 1.1(t) of Legislative Decree No. 58 of 24 February 1998 ("Decree No. 58"), other than:

- to Italian qualified investors, as defined in Article 100 of Decree no. 58 by reference to Article 34-ter of CONSOB Regulation no. 11971 of 14 May 1999 ("Regulation no. 1197l") as amended ("Qualified Investors"); and

- in other circumstances that are exempt from the rules on public offer pursuant to Article 100 of Decree No. 58 and Article 34-ter of Regulation No. 11971 as amended.

Any offer, sale or delivery of the common stock or distribution of any offer document relating to the common stock in Italy (excluding placements where a Qualified Investor solicits an offer from the issuer) under the paragraphs above must be:

- made by investment firms, banks or financial intermediaries permitted to conduct such activities in Italy in accordance with Legislative Decree No. 385 of 1 September 1993 (as amended), Decree No. 58, CONSOB Regulation No. 16190 of 29 October 2007 and any other applicable laws; and

- in compliance with all relevant Italian securities, tax and exchange controls and any other applicable laws.

Any subsequent distribution of the common stock in Italy must be made in compliance with the public offer and prospectus requirement rules provided under Decree No. 58 and the Regulation No. 11971 as amended, unless an exception from those rules applies. Failure to comply with such rules may result in the sale of such common stock being declared null and void and in the liability of the entity transferring the common stock for any damages suffered by the investors.

Japan

The common stock has not been and will not be registered under Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948), as amended (the "FIEL") pursuant to an exemption from the registration requirements applicable to a private placement of securities to Qualified Institutional Investors (as defined in and in accordance with Article 2, paragraph 3 of the FIEL and the regulations promulgated thereunder). Accordingly, the common stock may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan other than Qualified Institutional Investors. Any Qualified Institutional Investor who acquires common stock may not resell them to any person in Japan that is not a Qualified Institutional Investor, and acquisition by any such person of common stock is conditional upon the execution of an agreement to that effect.

Portugal

This document is not being distributed in the context of a public offer of financial securities (*oferta pública de valores mobiliários*) in Portugal, within the meaning of Article 109 of the Portuguese Securities Code (*Código dos Valores Mobiliários*). The common stock has not been offered or sold and will not be offered or sold, directly or indirectly, to the public in Portugal. This document and any other offering material relating to the common stock has not been, and will not be, submitted to the Portuguese Securities Market Commission (*Comissão do Mercado de Valores Mobiliários*) for approval in Portugal and, accordingly, may not be distributed or caused to distributed, directly or indirectly, to the public in Portugal, other than under circumstances that are deemed not to qualify as a public offer under the Portuguese Securities Code. Such offers, sales and distributions of common stock in Portugal are limited to persons who are "qualified investors" (as defined in the Portuguese Securities Code). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Sweden

This document has not been, and will not be, registered with or approved by *Finansinspektionen* (the Swedish Financial Supervisory Authority). Accordingly, this document may not be made available, nor may the common stock be offered for sale in Sweden, other than under circumstances that are deemed not to require a prospectus under the Swedish Financial Instruments Trading Act (1991:980) (Sw. *lag (1991:980) om handel med finansiella instrument*). Any offering of common stock in Sweden is limited to persons who are "qualified investors" (as defined in the Financial Instruments Trading Act). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Switzerland

The common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering material relating to the common stock may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering material relating to the common stock has been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of common stock will not be supervised by, the Swiss Financial Market Supervisory Authority (FINMA).

This document is personal to the recipient only and not for general circulation in Switzerland.

United Arab Emirates

Neither this document nor the common stock have been approved, disapproved or passed on in any way by the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates, nor have we received authorization or licensing from the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates to market or sell the common stock within the United Arab Emirates. This document does not constitute and may not be used for the purpose of an offer or invitation. No services relating to the common stock, including the receipt of applications and/or the allotment or redemption of such shares, may be rendered within the United Arab Emirates by us.

No offer or invitation to subscribe for common stock is valid or permitted in the Dubai International Financial Centre.

United Kingdom

Neither the information in this document nor any other document relating to the offer has been delivered for approval to the Financial Services Authority in the United Kingdom and no prospectus (within the meaning of section 85 of the Financial Services and Markets Act 2000, as amended ("FSMA")) has been published or is intended to be published in respect of the common stock. This document is issued on a confidential basis to "qualified investors" (within the meaning of section 86(7) of FSMA) in the United Kingdom, and the common stock may not be offered or sold in the United Kingdom by means of this document, any accompanying letter or any other document, except in circumstances that do not require the publication of a prospectus pursuant to section 86(1) FSMA. This document should not be distributed, published or reproduced, in whole or in part, nor may its contents be disclosed by recipients to any other person in the United Kingdom.

Any invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) received in connection with the issue or sale of the common stock has only been communicated or

caused to be communicated and will only be communicated or caused to be communicated in the United Kingdom in circumstances in which section 21(1) of FSMA does not apply to us.

In the United Kingdom, this document is being distributed only to, and is directed at, persons (1) who have professional experience in matters relating to investments falling within Article 19(5) (investment professionals) of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 ("FPO"), (2) who fall within the categories of persons referred to in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the FPO or (3) to whom it may otherwise be lawfully communicated (together "relevant persons"). The investments to which this document relates are available only to, and any invitation, offer or agreement to purchase will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

LEGAL MATTERS

The validity of the securities being offered by this prospectus will be passed upon for us by Reed Smith LLP, San Francisco, California. Blank Rome LLP, New York, New York, is representing the underwriters in connection with this offering.

EXPERTS

The financial statements as of December 31, 2013 and 2014 and for the year ended December 31, 2014 and for the period from June 6, 2013 (inception) through December 31, 2013 included in this Prospectus and the Registration Statement, have been so included in reliance on the reports of BDO USA, LLP, an independent registered public accounting firm (the reports on the financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern), appearing elsewhere herein and in the Registration Statement, given on the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC under the Securities Act a registration statement on Form S-1 with respect to the common stock offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all the information set forth in the registration statement or the exhibits and schedules which are part of the registration statement, portions of which are omitted as permitted by the rules and regulations of the SEC. Statements made in this prospectus regarding the contents of any contract or other document are summaries of the material terms of the contract or document. With respect to each contract or document filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. For further information pertaining to us and the common stock offered by this prospectus, reference is made to the registration statement, including the exhibits and schedules thereto, copies of which may be inspected without charge at the public reference facilities of the SEC at 100 F Street, NE., Room 1580, Washington, D.C. 20549, as may the other reports, statements and information we file with the SEC. Copies of all or any portion of the registration statement may be obtained from the SEC at prescribed rates. Information on the public reference facilities may be obtained by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains a website that contains reports, proxy and information statements and other information that is filed through the SEC's EDGAR System. The website can be accessed at http.//www.sec.gov.

As a result of this offering, we will become subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, will file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements, and other information will be available for inspection and copying at the SEC's public reference facilities and the website of the SEC referred to above. We also maintain a website at www.jaguaranimalhealth.com. After the closing of this offering, you may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference into this prospectus.

Jaguar Animal Health, Inc.
(A Development Stage Company)

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
Jaguar Animal Health, Inc.
San Francisco, CA

We have audited the accompanying balance sheets of Jaguar Animal Health, Inc. (the "Company"), a majority-owned subsidiary of Napo Pharmaceuticals, Inc., as of December 31, 2014 and 2013 and the related statements of comprehensive loss, changes in common stock, convertible preferred stock and stockholders' deficit and cash flows for the year ended December 31, 2014 and the period from June 6, 2013 (inception) through December 31, 2013. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As described in Note 1 to the financial statements, the Company has suffered recurring losses from operations and has a net capital deficiency that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our opinion is not modified with respect to this matter.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Jaguar Animal Health, Inc. as of December 31, 2014 and 2013, and the results of its operations and its cash flows for the year ended December 31, 2014 and the period from June 6, 2013 (inception) through December 31, 2013, in conformity with accounting principles generally accepted in the United States of America.

/s/ BDO USA, LLP

San Francisco, California
March 20, 2015, except for Note 15 which is as of April 17, 2015.

Jaguar Animal Health, Inc.
Balance Sheets

	December 31, 2013	December 31, 2014	Pro Forma as of December 31, 2014 (unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 185,367	$ 845,192	$ 2,095,192
Inventory	—	198,029	
Deferred offering costs	—	2,480,049	
Prepaid license fee	100,000	—	
Prepaid expenses	—	24,170	
Deferred finance charges	3,894	86,667	
Total current assets	289,261	3,634,107	4,884,107
Property and equipment, net	—	872,523	
Total assets	$ 289,261	$ 4,506,630	$ 5,756,630
Liabilities, Convertible Preferred Stock and Stockholders' Equity (Deficit)			
Current liabilities:			
Accounts payable	$ 8,995	$ 698,318	
Due to parent	116,383	16,581	
Deferred revenue	—	23,802	
Convertible notes payable	519,486	424,674	250,000
Notes payable	—	478,709	
Warrant liability	—	601,889	
Accrued expenses	79,250	1,317,991	
Total current liabilities	724,114	3,561,964	2,533,401
License fee payable	—	1,875,000	
Total liabilities	724,114	5,436,964	4,660,401
Commitments and Contingencies (Note 7)			
Series A redeemable convertible preferred stock; $0.0001 par value, zero and 3,017,488 shares authorized at December 31, 2013 and 2014, respectively; 3,015,902 shares issued and outstanding at December 31, 2014; (liquidation preference of $6,777,338 at December 31, 2014); no shares issued or outstanding pro forma at December 31, 2014	—	7,304,914	—
Stockholders' Equity (Deficit)			
Common stock: $0.0001 par value, 10,000,000 and 15,000,000 shares authorized at December 31, 2013 and 2014, respectively; 2,666,666 and 2,874,330 shares issued and outstanding at December 31, 2013 and 2014, respectively; 5,259,923 shares issued and outstanding pro forma at December 31, 2014	267	288	525
Additional paid-in capital	366,083	1,175,242	12,181,808
Accumulated deficit	(801,203)	(9,410,778)	(11,086,104)
Total stockholders' equity (deficit)	(434,853)	(8,235,248)	$ 1,096,229
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$ 289,261	$ 4,506,630	

The accompanying notes are an integral part of these financial statements

Jaguar Animal Health, Inc.
Statements of Comprehensive Loss

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
Operating expenses		
General and administrative expense	$ 458,473	$ 4,095,324
Research and development expense	324,479	4,220,338
Total operating expenses	782,952	8,315,662
Loss from operations	(782,952)	(8,315,662)
Interest expense, net	(18,251)	(345,336)
Change in fair value of warrants	—	51,423
Net loss and comprehensive loss	$ (801,203)	$ (8,609,575)
Accretion of redeemable convertible preferred stock	—	(646,673)
Net loss attributable to common stockholders	$ (801,203)	$ (9,256,248)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.30)	$ (3.24)
Weighted-average common shares outstanding, basic and diluted	2,666,666	2,854,417
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)	$ (0.30)	$ (2.02)
Weighted-average shares used in computing pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)	2,666,666	4,592,283

The accompanying notes are an integral part of these financial statements

Jaguar Animal Health, Inc.

Statement of Changes in Common Stock, Convertible Preferred Stock and Stockholders' (Deficit)

	Series A Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balances at June 6, 2013 (inception)	—	$ —	—	$ —	$ —	$ —	$ —
Issuance of common stock to parent for services	—	—	2,666,666	267	359,188	—	359,455
Issuance of common stock warrants	—	—	—	—	6,895	—	6,895
Net loss and comprehensive loss	—	—	—	—	—	(801,203)	(801,203)
Balances at December 31, 2013	—	—	2,666,666	267	366,083	(801,203)	(434,853)
Stock-based compensation	—	—	—	—	164,156	—	164,156
Conversion of notes payable into common stock	—	—	207,664	21	524,979	—	525,000
Issuance of redeemable convertible preferred stock, net	3,015,902	6,658,241	—	—	—	—	—
Beneficial conversion feature on issuance of convertible promissory notes	—	—	—	—	614,557	—	614,557
Warrants issued in connection with line of credit	—	—	—	—	114,300	—	114,300
Warrants issued in connection with transfer agreement	—	—	—	—	37,840	—	37,840
Deemed dividends on redeemable convertible preferred stock	—	610,889	—	—	(610,889)	—	(610,889)
Accretion of issuance costs to liquidity amount	—	35,784	—	—	(35,784)	—	(35,784)
Net loss and comprehensive loss	—	—	—	—	—	(8,609,575)	(8,609,575)
Balances at December 31, 2014	3,015,902	$ 7,304,914	2,874,330	$ 288	$ 1,175,242	$ (9,410,778)	$ (8,235,248)

The accompanying notes are an integral part of these financial statements

Jaguar Animal Health, Inc.
Statements of Cash Flows

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
Cash Flows from Operating Activities		
Net loss	$ (801,203)	$ (8,609,575)
Adjustments to reconcile net loss to net cash used in operating activities:		
Materials cost in connection with license activity	—	1,082,626
Stock issued to parent for services	359,055	—
Warrants issued in connection with transfer agreement	—	37,840
Warrants issued in connection with line of credit	—	114,300
Stock-based compensation	—	164,156
Accretion of debt discount	1,381	176,766
Revaluation of warrant liability	—	(51,423)
Amortization of deferred finance charge	1,300	21,227
Changes in assets and liabilities:		
Inventory	—	(198,029)
Deferred finance charges	—	(104,000)
Prepaid license fee	(100,000)	100,000
Prepaid expenses	—	(24,170)
Due to parent	116,383	(99,802)
Deferred revenue	—	23,802
License fee payable	—	(25,000)
Accounts payable	8,995	689,323
Accrued expenses	79,250	1,238,741
Total Cash Used in Operating Activities	(334,839)	(5,463,218)
Cash Flows from Investing Activities		
Purchase of equipment	—	(55,149)
Total Cash Used in Investing Activities	—	(55,149)
Cash Flows from Financing Activities		
Proceeds from issuance of redeemable convertible preferred stock, net	—	6,658,241
Proceeds from issuance of redeemable convertible notes payable, net	519,806	1,100,000
Proceeds from issuance of notes payable, net	—	900,000
Deferred offering costs	—	(2,480,049)
Proceeds from issuance of common stock to parent	400	—
Total Cash Provided by Financing Activities	520,206	6,178,192
Net increase in cash and cash equivalents	185,367	659,825
Cash and cash equivalents, beginning of period	—	185,367
Cash and cash equivalents, end of period	$ 185,367	$ 845,192
Supplemental Schedule of Non-Cash Financing and Investing Activities		
Equipment received in connection with license agreement	—	$ 817,374
Notes payable converted into common stock	—	$ 525,000
Warrants issued in connection with convertible notes payable	—	$ 147,943
Warrants issued in connection with notes payable	—	$ 505,348
Accretion of redeemable convertible preferred stock	—	$ 646,673

The accompanying notes are an integral part of these financial statements

Jaguar Animal Health, Inc.

Notes to Financial Statements

1. Organization and Business

Jaguar Animal Health, Inc. ("Jaguar" or the "Company") was incorporated on June 6, 2013 (inception) in Delaware. The Company, a majority-owned subsidiary of Napo Pharmaceuticals, Inc. ("Napo" or the "Parent"), was formed to develop and commercialize gastrointestinal products for companion and production animals. The Company is an animal health company in the development-stage whose activities since inception have consisted principally of raising capital, recruiting management, and performing research and development. The Company's activities are subject to significant risks and uncertainties, including failing to secure additional funding to complete the development and commercialization of its products before another company develops similar products. The Company operates in one segment and is headquartered in San Francisco, California.

The following series of transactions between Jaguar and Napo were executed in order to separate the Company's business from Napo:

On June 11, 2013, Jaguar issued 2,666,666 shares of common stock to Napo in exchange for cash and services. On July 1, 2013, Jaguar entered into an employee leasing and overhead agreement (the "Service Agreement") with Napo, under which Napo agreed to provide the Company with the services of certain Napo employees for research and development and the general administrative functions of the Company. On January 27, 2014, Jaguar executed an intellectual property license agreement with Napo pursuant to which Napo transferred fixed assets and development materials, and licensed intellectual property and technology to Jaguar. On February 28, 2014, the Service Agreement terminated and the associated employees became employees of Jaguar effective March 1, 2014. Included in the statement of comprehensive loss from the period of June 6, 2013 (inception) through December 31, 2014 are general and administrative expense of $459,432 and research and development expense of $115,056 that were charged to Jaguar by Napo for the services of certain employees and overhead allocations. See Note 10 for additional information regarding the capital contributions and Notes 4 and 5 for the Service Agreement and license agreement details, respectively.

In October 2014, the Board of Directors and stockholders approved a 1-for-1.5 reverse stock split (the "Reverse Split") of the Company's outstanding shares of common stock and increased the number of authorized shares of common stock from 10,000,000 shares to 15,000,000 shares. The Company effected the Reverse Split on October 27, 2014. Under the terms of the Reverse Split, each share of common stock, issued and outstanding as of such effective date, was automatically reclassified and changed into two-thirds of one share of common stock, without any action by the stockholder. Fractional shares were rounded down to the nearest whole share. All share and per share amounts have been restated to reflect the Reverse Split.

Liquidity

The accompanying financial statements have been prepared assuming the Company will continue as a going concern. The Company has incurred recurring operating losses since inception and has an accumulated deficit of $(9,410,778) as of December 31, 2014. The Company expects to incur substantial losses in future periods. Further, the Company's future operations are dependent on the success of the Company's ongoing development and commercialization efforts. There is no assurance that profitable operations, if ever achieved, could be sustained on a continuing basis.

The Company 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 the Company on acceptable terms on a timely basis, if at all, or that the

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

1. Organization and Business (continued)

Company will generate sufficient cash from operations to adequately fund operating needs or ultimately achieve profitability. If the Company is unable to obtain an adequate level of financing needed for the long-term development and commercialization of its products, the Company will need to curtail planned activities and reduce costs. Doing so will likely have an adverse effect on the Company's ability to execute on its business plan. These matters raise substantial doubt about the ability of the Company to continue in existence as a going concern. The accompanying financial statements do not include any adjustments that might result from the outcome of these uncertainties.

2. Summary of Significant Accounting Policies

Basis of Presentation

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires the Company's management to make judgments, assumptions and estimates that affect the amounts reported in its financial statements and the accompanying notes. The accounting policies that reflect the Company's more significant estimates and judgments and that the Company believes are the most critical to aid in fully understanding and evaluating its reported financial results are valuation of stock options; valuation of warrant liabilities; impairment of long lived assets; useful lives for depreciation; valuation adjustments for excess and obsolete inventory; deferred taxes and valuation allowances on deferred tax assets; and evaluation and measurement of contingencies. Those estimates could change, and as a result, actual results could differ materially from those estimates.

Unaudited Pro Forma Information

The Company is filing a registration statement on Form S-1 with the U.S. Securities and Exchange Commission in connection with a proposed initial public offering ("IPO") of its common stock. If the IPO is consummated, the Company's outstanding convertible preferred stock will convert into shares of common stock of the Company on a one-for-two-thirds basis. The accompanying unaudited pro forma balance sheet as of December 31, 2014 has been prepared to give effect to the conversion of all outstanding shares of the Company's redeemable convertible preferred stock into 2,010,596 shares of the Company's common stock, the reclassification of the redeemable convertible preferred stock to common stock and the conversion of notes payable in the principal amount of $2,100,000 into 374,997 shares of the Company's common stock. The pro forma adjustments are reflected as if such conversion had occurred at the beginning of the period, or the issuance date if later. The unaudited pro forma balance sheet also reflects the issuance of $250,000 of additional convertible notes payable in February 2015 and $1,000,000 of additional convertible notes payable in March 2015.

Deferred Offering Costs

Deferred offering costs, consisting of legal, accounting and filing fees related to the Company's proposed IPO are capitalized. The deferred offering costs will be offset against IPO proceeds upon the effectiveness of the offering. In the event the offering is terminated, deferred offering costs will be expensed.

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

2. Summary of Significant Accounting Policies (continued)

Concentration of Credit Risk and Cash and Cash Equivalents

The financial instrument that potentially subjects the Company to a concentration of credit risk is that is held at a financial institution of high credit standing. Cash is generally in excess of Federal Deposit Insurance Corporation ("FDIC") insurance limits. Therefore, the Company is exposed to credit risk in the event that the balances exceed FDIC insurance limits. The carrying value of cash approximates fair value at December 31, 2013 and 2014.

Fair Values

The Company's financial instruments include, cash and cash equivalents, accounts payable, accrued expenses, amounts due to parent, warrant liabilities, and debt. Cash is reported at fair value. The recorded carrying amount of accounts payable, accrued expenses and amounts due to parent approximates their fair value due to their short-term nature. The carrying value of the interest-bearing debt approximates fair value based upon the borrowing rates currently available to the Company for bank loans with similar terms and maturities. See Note 3 for the fair value measurements, and Note 8 for the fair value of the Company's warrant liabilities.

Inventories

Inventories are stated at the lower of cost or market. The Company calculates inventory valuation adjustments when conditions indicate that the net realizable value is less than cost due to physical deterioration, usage, obsolescence, reductions in estimated future demand or reduction in selling price. Inventory write-downs are measured as the difference between the cost of inventory and estimated net realizable value.

Property and Equipment

Equipment is stated at cost, less accumulated depreciation. Equipment begins to be depreciated when it is placed into service. Depreciation will be calculated using the straight-line method over the estimated useful lives of 3 to 10 years.

Expenditures for repairs and maintenance of assets are charged to expense as incurred. Costs of major additions and betterments are capitalized and depreciated on a straight-line basis over their useful lives. Upon retirement or sale, the cost and related accumulated depreciation of assets disposed of are removed from the accounts and any resulting gain or loss is included in income (loss) from operations.

Long-Lived Assets

The Company regularly reviews the carrying value and estimated lives of all of its long-lived assets, including property and equipment to determine whether indicators of impairment may exist that warrant adjustments to carrying values or estimated useful lives. The determinants used for this evaluation include management's estimate of the asset's ability to generate positive income from operations and positive cash flow in future periods as well as the strategic significance of the assets to the Company's business objectives.

Should an impairment exist, the impairment loss would be measured based on the excess of the carrying amount over the asset's fair value. The Company has not recognized any impairment losses through December 31, 2014.

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

2. Summary of Significant Accounting Policies (continued)

Research and Development Expense

Research and development expense consists of expenses incurred in performing research and development activities including related salaries, clinical trial and related drug and non-drug product costs, contract services and other outside service expenses. Research and development expense is charged to operating expense in the period incurred.

Revenue Recognition

Sales to distributors will be made under agreements providing distributor price adjustments and rights of return under certain circumstances. Revenue and costs of distributor sales will be deferred until products are sold by the distributor to the distributor's end customers. Revenue recognition depends on notification from the distributor that product has been sold to the distributor's end customer. Also reported by the distributor will be product resale price, quantity and end customer shipment information, as well as inventory on hand. Reported distributor inventory on hand will be reconciled to the deferred revenue balance monthly. The Company will maintain system controls to validate distributor data and to verify that the reported information is accurate. Deferred revenue on shipments to distributors will reflect the estimated effects of distributor price adjustments 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 inventory will be relieved when title to inventories transfers, typically upon shipment from the distributor, at which point the Company will have a legally enforceable right to collection under normal payment terms. The Company had no revenue for the period from June 6, 2013 (inception) through December 31, 2013 and for the year ended December 31, 2014. Deferred revenue at December 31, 2013 and 2014 was zero and $23,802, respectively.

Stock-Based Compensation

The Company's equity incentive plan (see Note 11) provides for the grant of stock options, restricted stock and restricted stock unit awards.

The Company measures stock 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. The Company issues stock awards with only service-based vesting conditions, and records compensation expense for these awards using the straight-line method.

The Company values its shares of common stock by taking into consideration its most recently available valuation of common stock performed by management and the board of directors, as well as additional factors that may have changed since the date of the most recent contemporaneous valuations through the date of grant.

In the absence of a valuation, the fair value of the Company's common stock underlying stock awards is determined by its board of directors, with assistance from management, based upon information available at the time of grant. Given the absence of a public trading market for its common stock, and in accordance with the "American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation," the Company's board of directors exercises its reasonable judgment and considers numerous objective and subjective factors to determine the best estimate of the fair value of its common stock at each grant date.

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

2. Summary of Significant Accounting Policies (continued)

Classification of Securities

The Company 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.

Income Taxes

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the financial statements or in the Company's tax returns. Deferred taxes are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

The Company accounts for uncertainty in income taxes recognized in the financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate, as well as the related net interest and penalties.

Comprehensive Loss

Comprehensive loss is defined as changes in stockholders' (deficit) exclusive of transactions with owners (such as capital contributions and distributions). For the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014, there was no difference between net loss and comprehensive loss.

Segment Data

The Company manages its operations as a single segment for the purposes of assessing performance and making operating decisions. The Company is an animal health company focused on developing and commercializing prescription and non-prescription products for companion and production animals.

Basic and Diluted Net Loss Per Common Share

Basic net loss per common share is computed by dividing net loss attributable to common stockholders for the period by the weighted-average number of common shares outstanding during the

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

2. Summary of Significant Accounting Policies (continued)

period. Diluted net loss per share is computed by dividing the net loss attributable to common stockholders for the period by the weighted-average number of common shares, including potential dilutive shares of common stock assuming the dilutive effect of potential dilutive securities. For periods in which the Company reports a net loss, diluted net loss per common share is the same as basic net loss per common share, because their impact would be anti-dilutive to the calculation of net loss per common share. Diluted net loss per common share is the same as basic net loss per common share for the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014.

Recent Accounting Pronouncements

In August 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-15, "Presentation of Financial Statements—Going Concern (Subtopic 205-40)—Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern", which provides guidance regarding management's responsibility to assess whether substantial doubt exists regarding the ability to continue as a going concern and to provide related footnote disclosures. In connection with preparing financial statements for each annual and interim reporting period, management should evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that the financial statements are issued (or within one year after the date that the financial statements are available to be issued when applicable). This ASU is effective for the annual period ending after December 15, 2016, and for annual periods and interim periods thereafter. The Company is currently evaluating the new guidance and has not determined the impact this standard may have on its financial statements.

In June 2014, the FASB issued authoritative guidance which eliminates the distinction of a development stage entity and certain related disclosure requirements, including the elimination of inception-to-date information on the statements of operations, cash flows and stockholders' equity. The amendments will be effective prospectively for annual reporting periods beginning after December 15, 2014, and interim periods within those annual periods, however early adoption is permitted. The Company elected to early adopt the new provision of ASU 2014-10 in the year ended December 31, 2014 and therefore has eliminated the presentation of inception to date information.

In June 2014, the FASB issued authoritative guidance which requires that a performance target that affects vesting and that could be achieved after the requisite service period be treated as a performance condition. The performance target should not be reflected in estimating the grant-date fair value of the award. Compensation cost should be recognized in the period in which it becomes probable that the performance target will be achieved and should represent the compensation cost attributable to the period(s) for which the requisite service has already been rendered. If the performance target becomes probable of being achieved before the end of the requisite service period, the remaining unrecognized compensation cost should be recognized prospectively over the remaining requisite service period. The total amount of compensation cost recognized during and after the requisite service period should reflect the number of awards that are expected to vest and should be adjusted to reflect those awards that ultimately vest. The requisite service period ends when the employee can cease rendering service and still be eligible to vest in the award if the performance target is achieved. This guidance will be effective for annual periods (and interim periods within those annual periods) beginning after December 15, 2015. The Company will implement this guidance for all interim and annual periods beginning after December 15,

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

2. Summary of Significant Accounting Policies (continued)

2015. The adoption of this guidance is not expected to have an impact on the Company's financial condition, results of operations or cash flows.

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, 2016 and allows for prospective or retrospective application. The Company is evaluating the new guidance and has not determined the impact this pronouncement will have on its financial statements.

3. Fair Value Measurements

ASC 820 "Fair Value Measurements," defines fair value, establishes a framework for measuring fair value under generally accepted accounting principles and enhances disclosures about fair value measurements. Fair value is defined under ASC 820 as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value under ASC 820 must maximize the use of observable inputs and minimize the use of unobservable inputs. The standard describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value which are the following:

- Level 1—Quoted prices in active markets for identical assets or liabilities;
- Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data; and
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The following table presents information about the Company's liability that is measured at fair value on a recurring basis as of December 31, 2014 and indicates the fair value hierarchy of the valuation:

As of December 31, 2014:

	Level 1	Level 2	Level 3	Total
Warrant liability	$ —	$ —	$ 601,889	$ 601,889

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

3. Fair Value Measurements (continued)

The change in the estimated fair value of the warrant liability is summarized below:

	Beginning Value of Level 3 Liability	Issuance of Common Warrants	Change in Fair Value of Level 3 Liability	Ending Fair Value of Level 3 Liability
For the year ended December 31, 2014	$ —	$ 653,312	$ 51,423	$ 601,889

The change in the fair value of the level 3 warrant liability is reflected in the statement of comprehensive loss for the year ended December 31, 2014.

There were no assets or liabilities measured at fair value on a recurring basis at December 31, 2013.

4. Employee Leasing and Overhead Allocation Agreement

Effective July 1, 2013, the Company entered into an employee leasing and overhead allocation agreement (the "Service Agreement") with its parent, Napo. The term of the Service Agreement was from July 1, 2013 through February 28, 2014. In connection with the Service Agreement, Napo provided the Company with the services of Napo employees. The Service Agreement also stipulated that Jaguar would pay for a portion of Napo's overhead costs. The Company agreed to pay Napo $71,811 per month (consisting of $38,938 for executive compensation, $26,873 for employee services, and $6,000 for overhead costs) for the months from July 2013 through February 2014 as follows: (1) for the period from July 2013 through November 2013, in 2,666,666 shares of common stock and (2) for the period from December 2013 through February 2014, in cash. Included in due to parent on the accompanying balance sheet at December 31, 2013 is $71,811 related to the amount due for December 2013. Commencing March 1, 2014, the relevant Napo employees became employees of the Company and all overhead costs related to the animal health business will be paid by the Company.

General and administrative expense recognized under the Service Agreement was $344,574 and $114,858 for the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014, respectively.

Research and development expense recognized under the Service Agreement was $86,292 and $28,764 for the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014, respectively.

5. License Agreement

On July 11, 2013, Jaguar entered into an option to license Napo's intellectual property and technology (the "Option Agreement"). Under the Option Agreement, upon the payment of $100,000 in July 2013, the Company 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 the Company's animal health business. The option price was creditable against future license fees to be paid to Napo under the License Agreement (as defined below). As such, $100,000 is included on the balance sheet as a prepaid license fee at December 31, 2013.

In January 2014, the Company 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 the Company to develop, formulate, manufacture, market, use, offer for sale, sell, import, export,

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

5. License Agreement (continued)

commercialize and distribute products for veterinary treatment uses and indications for all species of animals. The Company 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 Company's option, the license fee could have been paid in common stock. Milestone payments may also be due to Napo aggregating $3,150,000 based on regulatory approvals of various veterinary products. In addition to the milestone payments, the Company will owe Napo an 8% royalty on annual net sales of products derived from *Croton lechleri*, 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, the Company 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, in the event of an IPO of at least $10,000,000 prior to December 31, 2015, the royalty shall be 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.

In addition to receiving a License Agreement to Napo's intellectual property and technology, the License also transferred to the Company certain materials and equipment. Materials transferred from Napo have been included in research and development expense on the statements of comprehensive loss. Equipment of $817,374 related to the License is included on the balance sheet at December 31, 2014 at the cost paid by Napo, which approximates fair value. As of December, 2014, the equipment has not been placed into service. The Company will begin depreciating the equipment on a straight-line basis over its estimated life of 10 years at the time it is placed into service.

The Company 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 Company'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. During the year ended 2015, payments totaling $1,175,000 will be made, with the balance paid during the first quarter of 2016. Additionally, the terms of the License Agreement were amended to require the mutual agreement of the parties for payment of the license fee to be remitted in the form of the Company's common stock. The Company may also, at its sole discretion, elect to remit any milestone payments and/or royalties in the form of the Company's common stock.

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

6. Accrued Expenses

Accrued expenses at December 31, 2013 and 2014 consist of the following:

	December 31, 2013	December 31, 2014
Accrued legal costs	$ —	$ 738,600
Accrued printing costs	—	275,000
Due to veterinary school of medicine	45,000	—
Accrued consulting fees	17,683	—
Accrued interest	15,671	29,292
Accrued vacation	—	140,408
Other	896	134,691
	$ 79,250	$ 1,317,991

7. Commitments and Contingencies

In 2013, a veterinary school of medicine began a field study for the Company. The Company agreed to make payments to the school totaling $190,000. The total expense for the period from June 6, 2013 (inception) to December 31, 2013 was $145,000 and for the year ended December 31, 2014 was $45,000.

Since March 1, 2014, the date the Service Agreement terminated, the Company paid Napo $33,897 for rent related to the office space utilized by the Company for the months of March, April and May, 2014. Effective on June 1, 2014, the Company assumed the existing sublease from Napo. The term of the sublease is from June 1, 2014 through June 30, 2015. Minimum lease payments to be paid during 2015 will be $63,795.

Effective June 26, 2014 the Company entered into a technology transfer and commercial manufacturing agreement (the "Transfer Agreement") with a contract manufacturer in Italy (the "Manufacturer"), whereby the Company and the Manufacturer will cooperate to develop and refine the manufacturing process for the Company's prescription and non-prescription products. Pursuant to the Transfer Agreement, the Company was to make prepayments to the Manufacturer as follows: (1) a start-up fee of €500,000, €250,000 of which was to be paid at the earlier to occur of September 15, 2014 or the closing date of an initial public offering and €250,000 of which was to be paid at the time of installation and qualification of the Company's equipment at their facility, (2) related to the technology transfer, €620,000, €310,000 of which was paid subsequent to the signature of the Transfer Agreement and €310,000 of which was to be paid after the delivery of a final study report, (3) for design of a portion of the Manufacturer's facility, €100,000 was to be paid within five days of the signature of the Transfer Agreement, and (4) a €300,000 bonus fee payable in two equal installments, the first of which is due by the end of March 2015, with the remainder paid by the end of December 2015. Additionally, the Transfer Agreement stipulated that the Company was to pay the Manufacturer an aggregate of €500,000 upon the delivery of agreed-upon levels of satisfactory product. Further, the Company issued the Manufacturer warrants to purchase 16,666 shares of common stock with an exercise price of 90% of the initial public offering price. (Note 8)

Effective February 12, 2015 the Company entered into an amendment delaying payments to the Manufacturer as follows: i) the €500,000 start-up fee is now due by the end of March 2015, (ii) related to the technology transfer, of the remaining €310,000, €215,000 is now due March 31, 2015 and €95,000 is now due June 30, 2015, (iii) related to the design of a portion of the Manufacturer's facility, the payment has

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

7. Commitments and Contingencies (continued)

increased to €170,000, €150,000 of which is due on March 31, 2015 and €20,000 is due on June 30, 2015, (iv) the fees linked to the deliverables are now due €250,000 on March 31, 2015 and €250,000 on June 30, 2015.

8. Debt and Warrants

From July through September 2013, the Company 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.

The Company consummated a first equity round of financing prior to the Maturity Date with a pre-money valuation of greater than $3,000,000, and, accordingly, principal and accrued interest was converted into shares of common stock at 75% of the purchase price paid by such equity investors.

In connection with the Notes, the Company issued to the noteholders warrants, 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 are fully exercisable from the initial date of the first equity round of financing and have a five-year term subsequent to that date.

In February 2014, the Company closed its first equity round of financing and sold 2,224,991 shares of Series A convertible preferred stock at a price of $2.2472 per share. The pre-money valuation was in excess of $3,000,000 setting the exercise price of the Warrants at 75% of the purchase price paid by the investors, or $2.5281 per share. As such, the fair value of the Warrants, $6,895, was recorded as equity in February 2014. The Warrants were valued at $6,895 using the Black-Scholes model with the following assumptions: exercise price of $2.5281, term of five years, volatility of 64%, dividend yield of 0%, and risk-free interest rate of 1.82%. Based on the fair value of the Warrants, the Company used the residual value of the total proceeds from the issuance of the Notes and Warrants to record the Notes on the balance sheet as of issuance of the Notes. Thus, the amount recorded, in the aggregate, for the Notes on issuance was $518,105, net. The debt discount of $6,895 is recorded as interest expense over the five-year term of the Warrants. Interest expense recorded from the period from June 6, 2013 (inception) through December 31, 2013 was $1,381. At December 31, 2013, the net amount of the Notes is $519,486.

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. As such, the Notes are classified as current on the accompanying balance sheet as of December 31, 2013. 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.

On June 2, 2014, pursuant to a convertible note purchase agreement, the Company 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 the same board member to which Series A preferred stock was sold. These notes bear interest at 3% per annum and automatically mature on June 1, 2015. Accrued interest shall be paid in cash upon maturity. Upon the closing of an initial public offering, the outstanding

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

8. Debt and Warrants (continued)

principal amount shall automatically convert into common stock at 80% of the price in the initial public offering. If the Company has not consummated an initial public offering on or before June 1, 2015, then the principal then outstanding will automatically convert at 80% of the Company's next preferred stock financing. The Company has analyzed the beneficial nature of the conversion terms and determined that a beneficial conversion feature ("BCF") exists because the effective conversion price was less than the fair value at the time of the issuance. The Company calculated the value of the BCF using the intrinsic method. A BCF of $75,000 has been recorded as a discount to the notes payable and to additional paid-in capital. For the year ended December, 2014, the Company has amortized $43,750 of the discount, which has also been recorded as interest expense.

On July 16, 2014, pursuant to a convertible note purchase agreement, the Company issued a convertible promissory note in the principal amount of $150,000 to an accredited investor. This note bears an annual interest rate of 3% per annum and will automatically mature on June 1, 2015 Accrued interest shall be paid in cash upon maturity. Upon the closing of an initial public offering, the outstanding principal amount shall automatically convert into common stock at 80% of the price in the intitial public offering. If the Company has not consummated an initial public offering on or before June 1, 2015, then the principal then outstanding will automatically convert at 80% of the Company's next preferred stock financing. The Company has analyzed the beneficial nature of the conversion terms and determined that a BCF exists because the effective conversion price was less than the fair value at the time of the issuance. The Company calculated the value of the BCF using the intrinsic method. A BCF of $37,500 has been recorded as a discount to the notes payable and to additional paid-in capital. For the year ended December 31, 2014, the Company has amortized $19,643 of the discount, which has also been recorded as interest expense.

In connection with the Transfer Agreement (Note 7) the Company issued fully vested and immediately exercisable warrants to the Manufacturer to purchase 16,666 shares of common stock at 90% of the IPO price, 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 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%.

In August 2014, the Company entered into a standby line of credit with an accredited investor for up to $1,000,000 pursuant to a Line of Credit and Loan Agreement dated August 26, 2014. The minimum amount of any drawdown is $250,000, the lender has no obligation to fund more than once every 10 calendar days, and the Company must provide 15 business days prior notice for any drawdown and may not draw down funds after March 31, 2015. Outstanding borrowings bear interest at a rate of 3.0% per annum, and all borrowings are due in full on the one-year anniversary of the first drawdown. In the event of closing of an IPO, outstanding principal amounts borrowed under the standby line of credit may be converted, at the option of the lender, into shares of common stock at a conversion price equal to 80% of the IPO price. In connection with the entry into the standby line of credit, the Company 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, which expires in August 2016. If an IPO is not consummated prior to August 26, 2015, the exercise price of the warrants will be $3.375 per share. The fair value of the warrants, $114,300, was recorded as interest expense and additional paid-in capital in August 2014. The warrants were 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%. As of December 31, 2014, there have been no drawdowns.

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

8. Debt and Warrants (continued)

On October 30, 2014, the Company entered into a standby bridge financing agreement with two lenders, which was amended and restated on December 3, 2014, which provides a loan commitment in the aggregate principal amount of $1,000,000 (the "Bridge"). Proceeds to the Company were net of a $100,000 debt discount under the terms of the Bridge. This debt discount will be recorded as interest expense using the effective interest method, over the six month term of the Bridge. The Bridge becomes payable upon the earlier of June 3, 2015 and the consummation of a "major transaction," which includes an IPO. Upon repayment of the Bridge, the Company will pay interest thereon in an amount of $60,000 if repayment occurs within 30 days of the date the Bridge was issued and in an amount of $120,000 if repayment occurs within 30 and 180 days of the date the Bridge was issued. In addition, repayment of the Bridge must be in the amount of (a) 110% of the principal and interest of the Bridge if the repayment occurs between 31 and 60 days after the date the Bridge was issued, (b) 112% of the principal and interest of the Bridge if the repayment occurs between 61 and 90 days after the date the Bridge was issued, (c) 114% of the principal and interest of the Bridge if the repayment occurs between 91 and 120 days after the date the Bridge was issued, (d) 116% of the principal and interest of the Bridge if the repayment occurs between 121 and 150 days after the date the Bridge was issued and (e) 118% of the principal and interest of the Bridge if the repayment occurs between 151 and 180 days after the date the Bridge was issued. In connection with the Bridge, the lenders were granted warrants to purchase that number of shares of the Company's common stock determined by dividing $1,000,000 by the exercise price. The exercise price will be determined as follows: (i) if the warrants are exercised prior to consummation of an IPO, the exercise price will be 80% of the lowest price of any share of common stock or common stock equivalent sold in a private placement in one transaction or series of related transactions that equal or exceeding $4,000,000 in the aggregate (the "Pre-IPO exercise price"), and (ii) if the warrants are exercised following an IPO, the exercise price will be the lower of the Pre-IPO exercise price, if any, and 80% of the IPO price. The fair value of the warrants, $505,348, was recorded as a debt discount and liability at December 3, 2014 and the liability will be revalued at each reporting date prior to the exercise price being established. The warrants were valued using the Black-Scholes model with the following assumptions: stock price of $5.01, exercise price of $5.23, term of five years, 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 will be 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), $84,057 was recorded as interest expense during the year ended December 31, 2014. Additional financing costs of $104,000 were incurred related to the Bridge and deferred on closing. These are being recognized as interest expense over the six-month term of the Bridge using the effective interest method. During the year ended December 31, 2014, $17,333 of these deferred financing charges was recorded as interest expense. The warrant liability was $453,925 at December 31, 2014. The Company recorded the reduction in fair value of the warrant as a gain in the amount of $51,423 in the statement of comprehensive loss for the year ended December 31, 2014.

On December 23, 2014, pursuant to a convertible note purchase agreement, the Company 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 bear interest at 12% per annum and become payable upon demand by the holders within thirty days following an IPO consummated on, or prior to, June 30, 2015. In the event of an IPO that is consummated on, or prior to, June 30, 2015, the noteholders may convert the notes at a conversion price equal to 80% of the Company's IPO price. If these notes have not been converted prior to July 31, 2015, nor declared

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

8. Debt and Warrants (continued)

within thirty days after an IPO due and payble by the holders, the due date will automatically be extended to July 31, 2016 if the Company has not otherwise elected to prepay the Notes within thirty days after the IPO. If the Company has not consummated an IPO on, or prior to, June 30, 2015, the holders may convert the principal amount under these notes into the Company's common stock at a conversion price of $2.696 per share at any time prior to July 31, 2016. Thereafter, the holders may convert all principal and accrued interest outstanding under the Notes at a conversion price of $2.696 until the Notes are paid in full. In connection with these notes, the Company also issued the lenders a fully vested warrant to purchase shares of the Company's common stock. In the event of an IPO consummated on, or prior to, June 30, 2015, the exercise price will be 80% of the IPO price. If the Company has not consummated an IPO on, or prior to, June 30, 2015, the exercise price will be $2.696 per share. These warrants entitle the noteholders to purchase, after the exercise price has been established, that number of shares of common stock determined by dividing 50% of the corresponding original principal amount issued by the exercise price. The fair value of the warrants, $147,943, was recorded as a debt discount and liability at December 23, 2014 and the liability will be revalued at each reporting date prior to the exercise price being established. The warrants were valued using the Black-Scholes model with the following assumptions: stock price of $4.59, exercise price of $4.15, term of three years, 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 will be recorded 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. The Company has analyzed the beneficial nature of the conversion terms and determined that a BCF exists because the effective conversion price was less than the fair value at the time of the issuance. The Company calculated the value of the BCF using the intrinsic method. A BCF of $502,057 has been recorded as a discount to the notes payable and to additional paid-in capital. For the year ended December 31, 2014, the Company has amortized $23,781 of the BCF which has also been recorded as interest expense. The warrant liability was $147,965 at December 31, 2014. Changes in the fair value of the warrants between December 23, 2014 and December 31, 2014 were not material.

As of December 31, 2014, the future annual maturities of debt are as follows:

Fiscal Year	
2015	$ 2,100,000
Thereafter	—

In connection with a subsequent convertible note issuance by the Company to an "accredited investor" in February, 2015, in the principal amount of $150,000, these December notes were amended and restated to reflect the terms of the February, 2015 note issuance. An additional convertible note in the principal amount of $100,000 under the same terms was also subsequently issued to an "accredited investor" in February for an aggregate principal amount under all such notes of $900,000.

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

9. Redeemable Convertible Preferred Stock

The following is a summary of the Company's Series A redeemable convertible preferred stock at December 31, 2014:

Preferred shares authorized	3,017,488
Issuance dates	February, April and May 2014
Preferred shares issued and outstanding	3,015,902
Redemption value/liquidation preference	$9,020,637/$6,777,338
Carrying value	$7,304,914

The differences between the respective redemption values/liquidation preference and carrying values are being accreted over the period from the date of issuance to the earliest possible redemption date, February 2017.

Costs incurred in connection with the issuance of Series A redeemable convertible preferred stock (the "Preferred Stock") during the year ended December 31, 2014 were $119,097 which have been recorded as a reduction to the carrying amounts of Preferred Stock and are being accreted to the carrying value of the applicable preferred stock to the redemption date. The Company has recorded accretion of $35,784 for the year ended December 31, 2014.

The rights, preferences, and privileges of the Preferred Stock are as follows:

Voting—Except as provided by law, the holders of the Preferred Stock vote together and not as a separate class. On any matter presented to the stockholders of the Company for their action, each holder of outstanding shares of Preferred Stock is entitled to cast the number of votes equal to the number of whole shares of common stock into which the shares of Preferred Stock held by such holder could be converted as of the record date. The holders of Preferred Stock shall be entitled to vote on all matters on which the common stock shall be entitled to vote. Holders of Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the bylaws of the Company. Fractional votes shall not, however, be permitted and any fractional voting rights shall be disregarded.

Dividends—The holders of Preferred Stock are entitled to receive cumulative dividends at an annual rate of 8% of the Preferred Stock original issue price of $2.2472 per share, which dividends accrue daily in arrears, whether or not such dividends are declared by the Company's board of directors (the "Accruing Dividends"). The dividends are only payable when declared by the board of directors, out of any funds legally available. No such dividends have been declared or paid through December 31 2014. Dividends in arrears as of December 31, 2014 totaled $440,258.

Liquidation Rights—In the event of any voluntary or involuntary liquidation, dissolution or winding-up of the Company, either voluntary or involuntary, the holders of Preferred Stock then outstanding shall be entitled to receive, prior and in preference to any distribution of any of the assets of the Company to the holders of common stock by reason of their ownership of such stock, an amount equal to $2.2472 per share of Preferred Stock, plus any declared but unpaid dividends. If, upon liquidation, dissolution or winding up of the Company, the assets of the corporation legally available for distribution to the holders of the Preferred Stock are insufficient to permit the payment in full of the liquidation preference above, then the entire assets of the Company legally available for distribution shall be distributed with equal priority and pro rata among the holders of Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive.

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

9. Redeemable Convertible Preferred Stock (continued)

After the payment or setting aside for payment to the holders of Preferred Stock of the full amounts of the liquidation preferences, the entire remaining assets of the Company legally available for distribution after satisfaction of the liquidation preferences of the Preferred Stock shall be distributed to the holders of Preferred Stock and common stock, pro rata based upon the number of shares held by each such holder.

Conversion—Each share of Preferred Stock is convertible into shares of common stock at a conversion price initially equal to $2.2472 per share and is subject to adjustment as set forth in the Company's certificate of incorporation, as amended and restated. Conversion price adjustments may occur if there are new issuances of common stock at less than the conversion price or in the event of an IPO. At December 31, 2014, no such events have occurred and as such, no conversion adjustment has been recorded. At December 31, 2014, the shares of Preferred Stock were convertible into shares of common stock on a 1-for-1 basis. The shares of Preferred Stock are convertible into shares of common stock, at the option of the holder, at any time after the date of issuance. Further, upon the closing of an IPO (1) within six months of the initial Preferred Stock closing at a price per share at least three times the original issue price or (2) after six months at a price per share at least five times the original issue price, and which in both (1) and (2) results in at least $25,000,000 of gross proceeds to the Company, all outstanding shares of Preferred Stock shall automatically convert into shares of common stock. Each share of Preferred Stock is convertible into shares of common stock at the applicable conversion rate then in effect at the time of conversion, which is calculated by dividing the original issue price by the respective conversion price. Any shares of Preferred Stock that are converted into common stock will be canceled and cannot be reissued by the Company.

Redemption—Upon certain change in control events that are outside the Company's control, including liquidation, sale or transfer of control of the Company, the holders of the Preferred Stock can cause its redemption. If the Company fails to complete an initial public offering of its common stock by February 2017, the holders of a majority of the shares of the Preferred Stock may thereafter request redemption at a price equal to the Preferred Stock original issue price per share, plus, in lieu of any Accruing Dividends, 10% percent of the Preferred Stock original issue price per share for each 12 month period after the date of the initial closing, on a compounded basis, commencing not more than 60 days after receipt by the Company of the written notice requesting redemption. The Company has recorded cumulative deemed dividends of $610,889 for the year ended December 31, 2014.

The Preferred Stock has been classified outside of stockholders' (deficit) in accordance with authoritative guidance for the classification and measurement of potentially redeemable securities.

10. Common Stock

As of December 31, 2014, the Company's certificate of incorporation, as amended and restated, authorizes the Company to issue 15,000,000 shares of common stock $0.0001 par value.

The holders of common stock are entitled to one vote for each share of common stock held at all meetings of stockholders. The number of authorized shares of common stock may be increased or decreased by the affirmative vote of the holders of shares of capital stock of the Company representing a majority of the votes represented by all shares (including Preferred Stock) entitled to vote.

In June 2013, the Company issued 2,666,666 shares of common stock to its parent, Napo, for total cash consideration of $400 and services to be performed by the parent from July 1, 2013 through November 30, 2013 (see Note 4).

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

10. Common Stock (continued)

In February 2014, holders of certain convertible promissory notes exercised their option to convert the notes into 207,664 shares of the Company's common stock (see Note 8).

11. Stock-Based Awards

2013 Equity Incentive Plan

Effective November 1, 2013, the Company's board of directors and sole stockholder adopted the Jaguar Animal Health, Inc. 2013 Equity Incentive Plan (the "2013 Plan"). The 2013 Plan allows the Company's board of directors to grant stock options, restricted stock awards and restricted stock unit awards to employees, officers, directors and consultants of the Company. As of December 31, 2013, the Company had reserved 300,000 shares of its common stock for issuance under the 2013 Plan. In April 2014, the board of directors amended the 2013 Plan to increase the shares reserved for issuance to 847,533 shares. Following the effective date of the IPO and after effectiveness of any grants under the 2013 Plan that are contingent on the IPO, the 2013 Plan will be terminated and no additional stock awards will be granted under the 2013 Plan.

2014 Equity Incentive Plan

In July 2014, the Company adopted the Jaguar Animal Health, Inc. 2014 Stock Incentive Plan ("2014 Plan"). The 2014 Plan provides for the grant of incentive stock options to eligible employees, and for the grant of nonstatutory stock options, restricted stock, and RSUs to eligible employees, directors and consultants. The Company has reserved 333,333 shares of common stock for issuance pursuant to the 2014 Plan. To date, no stock awards have been granted under the 2014 Plan. Following the effective date of an IPO, any stock awards granted by the Company will be under the 2014 Plan.

Stock Options

During the year ended December 31, 2014, the Company granted stock options under the 2013 Plan for the purchase of 753,110 shares of common stock to employees and a non-employee director at a weighted-average exercise price of $2.66. The vesting conditions of these awards are time-based, and the awards all vest 25% after 9 months and monthly thereafter for the next 27 months. Awards expire after 10 years.

The Company grants stock options with exercise prices equal to the fair value of its common stock as of the date of grant. The Company only recognizes stock-based compensation cost for those shares underlying stock options that are expected to vest on a straight-line basis over the requisite service period of the award. The process of estimating the fair value of stock awards and recognizing stock-based compensation cost over their requisite service period involves significant assumptions and judgments. In addition, judgment is also required in estimating the number of stock-based awards that are expected to be forfeited. The Company estimates the fair value of stock option awards on the date of grant using the Black-Scholes option-valuation model for the remaining awards, which requires it to use certain assumptions regarding: (i) the expected volatility in the market price of its common stock; (ii) dividend yield; (iii) risk-free interest rates; and (iv) the period of time employees are expected to hold the award prior to exercise (referred to as the expected holding period). As a result, if the Company revises its assumptions and estimates, stock compensation expense could change materially for future grants. The Company estimates forfeitures at the time of grant and revises those estimates periodically in subsequent periods if actual forfeitures differ from those estimates. The Company uses historical data to estimate

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

11. Stock-Based Awards (continued)

pre-vesting option forfeitures and records stock-based compensation expense only for those awards that are expected to vest. All stock-based payment awards are amortized on a straight-line basis over the requisite service periods of the awards, which are generally the vesting periods. If the actual forfeiture rate is materially different from its estimate, the stock-based compensation expense could be significantly different from what the Company has recorded in the current period. The Company classifies stock compensation expense in the statement of comprehensive loss in the same manner in which the recipient's payroll costs are classified.

The relevant data used to determine the weighted-average grant date fair value of $1.545 of the stock option grants is as follows, presented on a weighted-average basis:

	Year Ended December 31, 2014
Risk free interest rate	2%
Expected term (in years)	5.81
Expected volatility	63%
Expected dividend yield	0%

The following table summarizes stock option activity for the year ended December 31, 2014:

	Shares issuable under options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)
Outstanding as of December 31, 2013	—	$ —	
Granted	753,110	2.66	
Forfeited—Unvested	(93,556)	2.54	
Outstanding as of December 31, 2014	659,554	2.67	9.3
Options expected to vest as of December 31, 2014	659,554	2.67	9.3
Options exercisable as of December 31, 2014	—		

Restricted Stock Units

The Company's 2013 Plan provides for the award of restricted stock units ("RSUs") with time-based and liquidity-event based vesting. Unvested RSUs may not be sold or transferred by the holder. These restrictions lapse according to the vesting.

During the year ended December 31, 2014, the Company granted 79,297 RSUs. These shares vest upon the occurrence of both a liquidity event and satisfaction of the service-based requirement. The time-based vesting provides that 50% of the RSU will vest on January 1, 2016 and the remaining 50% will vest on July 1, 2017. Because the liquidity condition is not met until the occurrence of a qualifying liquidity event (an IPO or change of control), the Company has not recorded any expense to date relating to the RSU grants. In connection with the IPO, the Company will begin recording stock compensation expense based on the grant date fair value of the RSUs using the straight-line method, net of estimated forfeitures. If the IPO had occurred on December 31, 2014, the Company would have recorded $24,920 of stock-based

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

11. Stock-Based Awards (continued)

compensation expense on that date related to RSUs and would have had an additional $85,689 in unamortized stock-based compensation expense related to RSUs. During the year ended December 31, 2014, 10,395 of these RSUs were forfeited.

The Company did not grant any RSUs prior to December 31, 2013.

Stock-Based Compensation

The Company recognizes compensation expense for only the portion of the awards that are expected to vest. The Company recorded stock-based compensation expense related to stock options of $93,360 and $70,796 to general and administrative expense and research and development expense, respectively.

As of December 31, 2014, the Company had $576,223, net of estimated forfeitures, of unrecognized stock-based compensation expense for options outstanding, which is expected to be recognized over a weighted-average period of 2.3 years.

12. Related Party Transactions

The Company is a majority-owned subsidiary of Napo. The Company has total outstanding liabilities to Napo in the amount of $116,383 and $16,581 as of December 31, 2013 and 2014, respectively. Additionally, Lisa A. Conte, Chief Executive Officer of the Company, is also the interim Chief Executive Officer of Napo Pharmaceuticals, Inc.

A member of the board of directors of the Company purchased 148,332 shares of the Company's preferred stock during the year ended December 31, 2014. The Company also issued a convertible promissory note for $200,000 to the same board member to whom the preferred stock was sold.

13. Net Loss Per Share Attributable to Common Stockholders

Basic net loss per share is calculated by dividing net loss by the weighted-average number of common shares outstanding during the period. Diluted net loss per share is computed by dividing net loss by the weighted-average number of common shares and common share equivalents outstanding for the period. Common stock equivalents are only included when their effect is dilutive. The Company's potentially dilutive securities which include convertible preferred stock and warrants have been excluded from the computation of diluted net loss per share as they would be anti-dilutive. For all periods presented, there is no difference in the number of shares used to compute basic and diluted shares outstanding due to the Company's net loss position.

The following table sets forth the outstanding potentially dilutive securities that have been excluded in the calculation of diluted net loss per shares.

	December 31, 2013	December 31, 2014
Convertible preferred stock	—	2,010,596
Options	—	659,554
Warrants to purchase common stock	207,664	257,663
Restricted stock units	—	68,902
Total	207,664	2,927,813

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

13. Net Loss Per Share Attributable to Common Stockholders (continued)

The table above does not include warrants with contingent exercise rates where the number of shares to be issued on exercise of the warrant is dependent on variables including the subsequent round price or IPO price and is therefore not known as of the balance sheet date. At December 31, 2014 the Company estimates such warrants will be exercisable into 269,583 shares. There were no warrants with contingent exercise rates at December 31, 2013. On March 20, 2015 the warrant agreements were amended with the result that the number of shares to be issued on exercise was fixed at 236,606.

Unaudited Pro Forma Net Loss Per Share

The following table summarizes the unaudited pro forma net loss per share attributable to common stockholders:

	December 31, 2014
Numerator:	
Net loss attributable to common stockholders	$ (9,256,248)
Denominator:	
Weighted-average common shares outstanding basic and diluted	2,854,417
Pro forma adjustments to reflect assumed conversion of preferred stock	1,737,866
Shares used to compute pro forma net loss per share, basic and diluted	4,592,283
Pro forma basic and diluted net loss per share attributable to common stockholders	$ (2.02)

As of December 31, 2013, there were 2,666,666 shares of common stock outstanding, therefore the pro forma net loss per share, basic and diluted, for the period from June 6, 2013 (inception) through December 31, 2013 is $(0.30) per share, and is equal to the net loss per share, basic and diluted, for the period from June 6, 2013 (inception) through December 31, 2013.

14. Income Taxes

The Company had a net comprehensive loss for the period from June 6, 2013 (inception) through December 31, 2013, of $801,203. The Company had a net comprehensive loss for the year ended December 31, 2014 of $8,609,575.

Due to continued losses for the year ended December 31, 2014, and a full valuation allowance, the Company has not recorded a provision for income taxes for the years ended December 31, 2013 and 2014.

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

14. Income Taxes (continued)

The components of the provision for income taxes for the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014 are as follows:

	December 31, 2013	December 31, 2014
Current:		
Federal	$ —	$ —
State	—	—
Foreign	—	—
Total current	$ —	$ —
Deferred:		
Federal	$ (273,843)	$ (2,844,539)
State	(48,002)	(511,406)
Foreign	—	—
Total deferred	$ (321,845)	$ (3,355,945)
Less: valuation allowance	321,845	3,355,945
Total provision for income taxes	$ —	$ —

The Company's effective tax rate for the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014, differed from the federal statutory rate as follows:

	December 31, 2013	December 31, 2014
Statutory rate	(34.0)%	(34.0)%
State taxes	(6.0)%	(5.9)%
Tax credits	(0.7)%	(0.8)%
Other	0.7%	2.2%
Valuation allowance	40.0%	38.5%
Effective tax rate	0.0%	0.0%

Net deferred tax assets as of December 31, 2013 and 2014 consist of the following:

	December 31, 2013	December 31, 2014
Non-current deferred tax assets:		
Net operating losses	$ 314,089	$ 3,610,478
Tax credits	7,756	124,025
Other	—	(56,713)
	321,845	3,677,790
Valuation allowance	(321,845)	(3,677,790)
Net non-current deferred tax assets	$ —	$ —

A valuation allowance is provided when it is more likely than not that the deferred tax assets will not be realized. The Company has established a valuation allowance to offset net deferred tax assets as of

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

14. Income Taxes (continued)

December 31, 2013 and 2014, due to the uncertainty of realizing future tax benefits from its net operating loss carryforwards and other deferred tax assets. The Company's deferred tax asset valuation allowance increased by $321,845 and $3,034,100 for the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014, respectively.

As of December 31, 2014, the Company had federal and California net operating loss carryovers of $9,087,176 and $9,068,156, respectively. The federal and California net operating losses will expire in 2033.

As of December 31, 2013 and 2014, the Company had federal and California research credit carryovers of $97,570 and $87,062, respectively. The federal research credits will begin to expire in 2033. The California research credits carry forward indefinitely.

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. In the event the Company has a change in ownership in the future, as defined by the tax law, utilization of the carryforwards could be limited.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits in 2013 and 2014 is as follows:

	December 31, 2013	December 31, 2014
Beginning balance	$ —	
Change for tax positions	—	31,006
Ending balance	$ —	31,006

There are no liabilities from unrecognized tax benefits included in the Company's balance sheet as of December 31, 2013 and 2014, and therefore the Company has not incurred any penalties or interest.

The Company files income tax returns in the United States and California, where the statute of limitations are 3 years and 4 years, respectively. The Company remains open for audit by the United States Internal Revenue Service and California state tax jurisdictions since inception. The Company is not currently under examination by income tax authorities in federal or state jurisdictions.

The Company does not anticipate that total unrecognized net tax benefits will significantly change prior to the end of 2015.

15. Subsequent Events

The Company completed an evaluation of the impact of subsequent events through March 20, 2015, the date these financial statements were issued. The following capital transactions have occurred. The effect of these transactions has not been included in the financial statements.

In February 2015, the Company 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.

See Note 5—"*License Agreement*" for a discussion of an amendment to the License Agreement in January 2015.

Jaguar Animal Health, Inc.

Notes to Financial Statements (continued)

15. Subsequent Events (continued)

See Note 7—"*Commitments and Contingencies*" for discussion of an amendment to the Transfer Agreement in February 2015.

In March 2015, the Company amended the terms of its then outstanding convertible promissory notes and warrants as follows: it amended the terms of the notes issued in June and July 2014 to extend the maturity date to June 30, 2015, and fixed the conversion price at $5.60 per share unless the IPO is not consummated on, or prior to, June 30, 2015, then the conversion price will be $2.696 per share; it amended the terms of a warrant issued to Indena S.P.A. on June 26, 2014, to fix the exercise price at $6.30 per share, unless the IPO is not consummated on, or prior to, June 30, 2015, then the exercise price will be $2.696 per share; it amended the terms of a warrant issued pursuant to a August 26, 2014 Line of Credit Loan Agreement to fix the exercise price at $5.60 per share, unless the IPO is not consummated on, or prior to, June 30, 2015, then the exercise price will be $2.696 per share; it amended the terms of the warrants issued pursuant to the December 3, 2014 Amended and Restated Standby Financing Agreement to fix the exercise price at $5.60 per share, unless the IPO is not consummated on, or prior to, June 30, 2015, then the exercise price will be $2.696 per share; it amended the terms of the notes and warrants issued in December 2014 and February 2015 pursuant to a December 23, 2014 Purchase Agreement to fix the conversion price of the notes and exercise price of the warrants at $5.60 per share, respectively, unless the IPO is not consummated on, or prior to, June 30, 2015, in which case the conversion price of the notes and exercise price of the warrants will be $2.696 per share, respectively.

In March 2015, the Company entered into a non-binding letter of intent with Dechra Pharmaceuticals PLC ("Dechra"), pursuant to which it agreed to negotiate a licensing agreement for rights to commercialize its leading prescription drug product candidate, Canalevia, for dogs in the European Union. In connection therewith, Dechra purchased $1.0 million of convertible promissory notes, the terms of which provide that such notes will automatically convert into shares of the Company's common stock upon the closing of the IPO at a conversion price of $5.60 per share. In connection with the purchase of the notes, the Company issued Dechra a warrant to purchase 89,285 shares at $5.60 per share, which expires December 31, 2017.

In March 2015, the holders of $650,000 aggregate principal amount of convertible promissory notes issued in December 2014 irrevocably elected to have their notes automatically convert into shares of the Company's common stock upon the closing of the IPO at a conversion price of $5.60 per share.

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 the IPO.

3,150,000 Shares
Common Stock

PROSPECTUS

Sole Book-Running Manager
Aegis Capital Corp

Co-Managers

CRT Capital **Feltl and Company**

, 2015

Until , 2015 (25 days after commencement of this offering), all dealers that buy, sell or trade shares of our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Part II—INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth an itemized statement of the expenses (excluding underwriting discounts) that are payable by us in connection with the registration, offer and sale of the common stock described in this registration statement. With the exception of the SEC registration fee, the FINRA filing fee and The NASDAQ Capital Market listing fee, the amounts set forth below are estimates.

	Amount to be Paid
SEC registration fee	$ 3,106
FINRA filing fee	4,510
NASDAQ Capital Market listing fee	50,000
Accounting fees and expenses	700,000
Legal fees and expenses	1,800,000
Printing and related expenses	400,000
Transfer agent and registrar fees	2,500
Miscellaneous	339,884
Total	$ 3,300,000

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 102(b)(7) of the DGCL authorizes a corporation in its certificate of incorporation to eliminate or limit personal liability of directors of the corporation for violations of the directors' fiduciary duty of care. However, directors remain liable for breaches of duties of loyalty, failing to act in good faith, engaging in intentional misconduct, knowingly violating a law, paying a dividend or approving a stock repurchase which was illegal under DGCL Section 174 or obtaining an improper personal benefit. In addition, equitable remedies for breach of fiduciary duty of care, such as injunction or recession, are available.

Our current certificate of incorporation eliminates the personal liability of the members of our board of directors to the fullest extent permitted by the DGCL. Any repeal or modification of that provision by the stockholders of the corporation will not adversely affect any right or protection of a director of the corporation existing at the time of such repeal or modification.

Section 145 of the DGCL provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our current bylaws provide for indemnification of our officers and directors to the fullest extent permitted by the DGCL.

We have entered into indemnification agreements with each of our directors, and intend to enter into such agreements with each of our officers prior to this offering, pursuant to which we agreed, to the maximum extent permitted by applicable law and subject to the specified terms and conditions set forth in each agreement, to indemnify a director or officer who acts on our behalf and is made or threatened to be made a party to any action or proceeding against expenses, judgments, fines and amounts paid in settlement that are incurred by such officer or director in connection with the action or proceeding. The indemnification provisions apply whether the action was instituted by a third party or by us.

We have purchased and maintain insurance on behalf of our officers and directors that provides coverage for expenses and liabilities incurred by them in their capacities as officers and directors.

In any underwriting agreement we enter into in connection with the sale of common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act against certain liabilities.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.

Since June 6, 2013 (inception), we have issued and sold the following securities without registration under the Securities Act. The information below includes the effect of a 1-for-1.5 reverse stock split of our common stock effected October 27, 2014.

(1) In June 2013, pursuant to a founder stock purchase agreement, we issued 2,666,666 shares of common stock to Napo Pharmaceuticals, Inc. for $400.

(2) From July through September 2013, pursuant to a note and warrant purchase agreement dated July 8, 2013, we issued convertible promissory notes in the aggregate principal amount of $525,000 and warrants to purchase 207,664 shares of common stock at an exercise price of $2.5281 per share, which warrants expire February 5, 2019, to four accredited investors. On February 4, 2014, these noteholders converted the notes in full for an aggregate of 207,664 shares of common stock.

(3) In February 2014, we issued an aggregate of 2,224,991 shares of Series A preferred stock for aggregate gross proceeds of $5.0 million to Kunlun Pharmaceuticals, Ltd., an accredited investor.

(4) In April 2014, we granted stock options to purchase 713,700 shares of common stock under our 2013 Equity Incentive Plan, with an exercise price of $2.54 per share to our executive officers and employees.

(5) In April 2014, we issued 585,321 shares of Series A preferred stock for aggregate gross proceeds of $1,315,337, to six accredited investors.

(6) In May 2014, we issued an aggregate of 205,590 shares of Series A preferred stock for aggregate gross proceeds of $462,002, to two accredited investors.

(7) In June 2014, we granted stock options to purchase 39,410 shares of common stock under our 2013 Equity Incentive Plan, which options have an exercise price of $4.83 per share to a member of our board of directors.

(8) In June 2014, we granted 79,297 restricted stock unit awards under our 2013 Equity Incentive Plan to our executive officers and employees.

(9) In June 2014, pursuant to a convertible note purchase agreement dated June 2, 2014, we issued convertible promissory notes in the aggregate principal amount of $300,000, to two accredited investors.

(10) In June 2014, we issued a warrant to purchase 16,666 shares of common stock at an exercise price of $6.30 per share (90% of the initial public offering price per share), to a contract manufacturer.

(11) In July 2014, pursuant to a convertible note purchase agreement dated June 2, 2014, we issued a convertible promissory note in the aggregate principal amount of $150,000, to an accredited investor.

(12) In August 2014, we entered into a standby line of credit with an individual, who is an accredited investor, for up to $1.0 million. Following closing of this offering, outstanding principal amounts borrowed under the standby line of credit may be converted, at the option of the lender, into shares of our common stock at a conversion price equal to 80% of the initial public offering price per share. In connection with the entry into the standby line of credit, we issued the lender a warrant to purchase 33,333 shares of our common stock at an exercise price of $5.60 per share (80% of the initial public offering price per share), which expires in August 2016. If an initial public offering is not consummated prior to August 26, 2015, the exercise price of the warrants will be $3.375 per share.

(13) In October 2014, we issued warrants to purchase that number of shares of common stock determined by dividing $2.0 million by the initial public offering price with an exercise price equal to the initial public offering price per share, to two accredited investors in connection with the entry into a bridge financing arrangement. In December 2014, we amended and restated the bridge financing arrangement and exchanged the warrants for new warrants. The new warrants provide for the purchase of an aggregate of 178,570 shares of common stock and have an exercise price of $5.60 per share.

(14) In December 2014, pursuant to a convertible note and warrant purchase agreement dated December 23, 2014, we issued convertible promissory notes in the aggregate principal amount of $650,000 to three accredited investors. In connection therewith, we issued these accredited investors three-year warrants to purchase an aggregate of 58,035 shares of common stock and have an exercise price of $5.60 per share. If an initial public offering has not been consummated by June 30, 2015, the exercise price will be $2.696 per share.

(15) In February 2015, pursuant to that certain convertible note and warrant purchase agreement dated December 23, 2014, we issued convertible promissory notes in the aggregate principal amount of $250,000 to two accredited investors. In connection therewith, we issued these accredited investors three-year warrants to purchase an aggregate of 22,320 shares of common stock and have an exercise price of $5.60 per share. If an initial public offering has not been consummated by June 30, 2015, the exercise price will be $2.696 per share.

(16) In February 2015, we granted 1,484 restricted stock unit awards under our 2013 Equity Incentive Plan to an executive officer, and approved the grant of stock options to purchase 203,030 shares of common stock under our 2013 Equity Incentive Plan, which grants are effective upon this offering with an exercise price equal to the initial public offering price to our executive officers and employees.

(17) In March 2015, pursuant to a convertible note and warrant purchase agreement, we issued convertible promissory notes in the aggregate principal amount of $1,000,000 to a commercial partner. In connection therewith, we also issued a warrant to purchase 89,285 shares of common stock at an exercise price of $5.60 per share to this commercial partner, which expires December 31, 2017.

The offers, sales, and issuances of the securities described in paragraphs (1)-(3), (5), (6), (9)-(15) and (17) above were deemed to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act, Regulation D or Regulation S promulgated thereunder as transactions by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these

transactions. Each of the recipients of securities in these transactions was an accredited or sophisticated person and had adequate access, through employment, business or other relationships, to information about us.

The offers, sales and issuances of the securities described in paragraphs (4), (7), (8) and (16) above were deemed to be exempt from registration under the Securities Act under Rule 701 promulgated under the Securities Act as offers and sale of securities pursuant to certain compensatory benefit plans and contracts relating to compensation in compliance with Rule 701.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) *Exhibits.* The following exhibits are included herein or incorporated herein by reference.

Exhibit No.	Description
1.1	Form of Underwriting Agreement.
3.1*	Amended and Restated Certificate of Incorporation, as amended and as currently in effect.
3.2*	First Certificate of Amendment to the Amended and Restated Certificate of Incorporation, as currently in effect.
3.3*	Second Certificate of Amendment to the Amended and Restated Certificate of Incorporation, as currently in effect.
3.4*	Bylaws as currently in effect.
3.5	Form of Amended and Restated Bylaws, to be effective upon the closing of this offering.
3.6*	Form of Second Amended and Restated Certificate of Incorporation, to be effective upon the closing of this offering.
4.1*	Specimen Common Stock Certificate of Jaguar Animal Health, Inc.
4.2*	Investor Rights Agreement by and between Jaguar Animal Health, Inc. and certain of its stockholders, dated February 5, 2014.
5.1*	Opinion of Reed Smith LLP.
10.1*	Form of Indemnification Agreement by and between Jaguar Animal Health, Inc. and its directors and officers.
10.2*	Jaguar Animal Health, Inc. 2013 Equity Incentive Plan.
10.3*	Form of Notice of Grant of Stock Option and Stock Option Agreement under the 2013 Equity Incentive Plan.
10.4*	Form of Notice of Grant of Restricted Stock Units and Restricted Stock Unit Agreement under the 2013 Equity Incentive Plan.
10.5*	Jaguar Animal Health, Inc. 2014 Stock Incentive Plan.
10.6*	Form of Notice of Grant of Stock Option and Stock Option Agreement under the 2014 Stock Incentive Plan.
10.7*	Form of Notice of Grant of Restricted Stock and Restricted Stock Agreement under the 2014 Stock Incentive Plan.
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10.9*	Offer Letter by and between Jaguar Animal Health, Inc. and Lisa A. Conte, dated March 1, 2014.
10.10*	Offer Letter by and between Jaguar Animal Health, Inc. and Serge Martinod, D.V.M., Ph.D., dated January 28, 2014.
10.11*	Offer Letter by and between Jaguar Animal Health, Inc. and Steven R. King, Ph.D., dated February 28, 2014.
10.12*	Offer Letter by and between Jaguar Animal Health, Inc. and Charles O. Thompson, dated February 28, 2014.
10.13*	Amended and Restated License Agreement by and between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated August 6, 2014.

Exhibit No.	Description
10.14*	Employee Leasing and Overhead Allocation Agreement by and between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated July 1, 2013.
10.15*	Assignment of Sublease and Landlord Consent by and between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated June 1, 2014.
10.16*	Form of Common Stock Warrant, which expires February 5, 2019.
10.17*	Form of Common Stock Warrant issued to Indena S.p.A., which expires June 26, 2019.
10.18*	Form of Convertible Note Purchase Agreement dated June 2, 2014 by and between Jaguar Animal Health, Inc. and certain of its Investors.
10.19*	Form of Convertible Promissory Note issued June 2014.
10.20*	Line of Credit Loan Agreement by and between Jaguar Animal Health, Inc. and Joshua Mailman, dated August 26, 2014.
10.21*	Form of Common Stock Warrant issued to Joshua Mailman, which expires August 26, 2016.
10.22*	Offer Letter by and between Jaguar Animal Health, Inc. and John A. Kallassy, dated as of September 19, 2014.
10.23*	Non-Disturbance Letter Agreement by and between Napo Pharmaceuticals, Inc. and Nantucket Investments Limited, as Administrative Agent and Collateral Agent, dated October 10, 2014.
10.24*	Separation Letter Agreement by and between Jaguar Animal Health, Inc. and Charles O. Thompson, dated October 2, 2014.
10.25*	Form of Warrant to Purchase Common Stock issued to GPB Life Science Holdings LLC and 31 Group, LLC, which expires October 30, 2019.
10.26	Amended and Restated Standby Bridge Financing Agreement among GPB Life Science Holdings LLC, 31 Group LLC and Jaguar Animal Health, Inc., dated as of December 3, 2014.
10.27	Form of Exchange Warrant to Purchase Common Stock, issued to GPB Life Science Holdings LLC and 31 Group, LLC, which expires June 3, 2020, as amended.
10.28*	Amendment No. 1 to Amended and Restated License Agreement between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated as of January 27, 2015.
10.29*	Form of Convertible Note and Warrant Purchase Agreement dated December 23, 2014 by and between Jaguar Animal Health, Inc. and certain of its investors.
10.30*	Form of Convertible Promissory Note issued pursuant to the Convertible Note and Warrant Purchase Agreement dated as of December 23, 2014.
10.31*	Form of Common Stock Warrant, issued pursuant to the Convertible Note and Warrant Purchase Agreement dated as of December 23, 2014, as amended.
10.32*	Offer Letter by and between Jaguar Animal Health, Inc. and Michael Hauser, D.V.M., dated as of March 3, 2015.
10.33	Form of Representative's Warrant
10.34	Form of Convertible Note Exercise Amendment pursuant to Convertible Note Purchase Agreement dated June 2, 2014.
10.35	Form of Warrant and Note Exercise Amendment pursuant to Convertible Note and Warrant Purchase Agreement dated December 23, 2014.

Exhibit No.	Description
10.36	Form of Note Exercise Amendment and Conversion Agreement pursuant to Convertible Note and Warrant Purchase Agreement dated December 23, 2014.
10.37	Convertible Note and Warrant Purchase Agreement dated March 20, 2015 by and between Jaguar Animal Health, Inc., and Dechra Pharmaceuticals PLC.
10.38	Convertible Promissory Note issued pursuant to the Convertible Note and Warrant Purchase Agreement dated March 20, 2015.
10.39	Common Stock Warrant issued pursuant to the Convertible Note and Warrant Purchase Agreement dated March 20, 2015, which expires December 31, 2017.
10.40	Form of Warrant Exercise Amendment pursuant to Exchange Warrant to Purchase Common Stock dated December 3, 2014.
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23.1	Consent of Independent Registered Public Accounting Firm.
23.2*	Consent of Reed Smith LLP (included in Exhibit 5.1).
24.1*	Power of Attorney (included on page II-7 of the original filing of this registration statement on Form S-1).

* Previously filed.

(b) *Financial Statement Schedules.* See page F-1.

ITEM 17. UNDERTAKINGS.

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

The undersigned registrant hereby undertakes that:

(a) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(b) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 6 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of San Francisco, State of California, on April 17, 2015.

JAGUAR ANIMAL HEALTH, INC.

By: /s/ LISA A. CONTE

Name: Lisa A. Conte
Title: Chief Executive Officer and President

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 6 to the Registration Statement has been signed by the following persons in the capacities and on the date indicated.

Signature	Title	Date
/s/ LISA A. CONTE Lisa A. Conte	Chief Executive Officer, President and Director (Principal Executive Officer)	April 17, 2015
/s/ JOHN A. KALLASSY John A. Kallassy	Executive Vice President, Chief Financial Officer, Chief Operating Officer and Treasurer (Principal Financial and Accounting Officer)	April 17, 2015
* James J. Bochnowski	Chairman of the Board	April 17, 2015
* Jiahao Qiu	Director	April 17, 2015
* Zhi Yang, Ph.D.	Director	April 17, 2015

*By: /s/ LISA A. CONTE
Lisa A. Conte, *Attorney-in-Fact*

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24.1*	Power of Attorney (included on page II-7 of the original filing of this registration statement on Form S-1).

* Previously filed.

Exhibit 1.1

FORM OF UNDERWRITING AGREEMENT

between

JAGUAR ANIMAL HEALTH, INC.

and

AEGIS CAPITAL CORP.,

as Representative of the Several Underwriters

JAGUAR ANIMAL HEALTH, INC.

UNDERWRITING AGREEMENT

New York, New York
[·], 2015

Aegis Capital Corp.
As Representative of the several Underwriters named on Schedule 1 attached hereto
810 Seventh Avenue, 18th Floor
New York, New York 10019

Ladies and Gentlemen:

The undersigned, Jaguar Animal Health, Inc., a corporation formed under the laws of the State of Delaware (the "**Company**"), hereby confirms its agreement (this "**Agreement**") with Aegis Capital Corp. (hereinafter referred to as "**you**" (including its correlatives) or the "**Representative**") and with the other underwriters named on Schedule 1 hereto for which the Representative is acting as representative (the Representative and such other underwriters being collectively called the "**Underwriters**" or, individually, an "**Underwriter**") as follows:

1. Purchase and Sale of Shares.

1.1 Firm Shares.

1.1.1 Nature and Purchase of Firm Shares.

(i) On the basis of the representations and warranties herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell to the several Underwriters, an aggregate of 3,150,000 shares (the "**Firm Shares**") of the Company's common stock, par value $0.0001 per share (the " **Common Stock** ").

(ii) The Underwriters, severally and not jointly, agree to purchase from the Company the number of Firm Shares set forth opposite their respective names on Schedule 1 attached hereto and made a part hereof at a purchase price of $6.51 per Firm Share (93% of the per Firm Share offering price). The Firm Shares are to be offered initially to the public at the offering price set forth on the cover page of the Prospectus (as defined in Section 2.1.1 hereof).

1.1.2 Firm Shares Payment and Delivery.

(i) Delivery and payment for the Firm Shares shall be made at 10:00 a.m., Eastern time, on the third (3rd) Business Day following the effective date (the "**Effective Date**") of the Registration Statement (as defined in Section 2.1.1 below) (or the fourth (4th) Business Day following the Effective Date if the Registration Statement is declared effective after 4:01 p.m., Eastern time) or at such earlier time as shall be agreed upon by the Representative and the Company, at the offices of Blank Rome LLP, 405 Lexington Avenue, New York, NY 10174 ("**Representative's Counsel**"), or at such other place (or remotely by facsimile or other electronic transmission) as shall be agreed upon by the Representative and the Company. The hour and date of delivery of and payment for the Firm Shares is called the "**Closing Date**."

(ii) Payment for the Firm Shares shall be made on the Closing Date by wire transfer in federal (same day) funds, payable to the order of the Company upon delivery of the certificates (in form and substance satisfactory to the Underwriters) representing the Firm Shares (or through the facilities of the Depository Trust Company ("**DTC**")) for the respective accounts of the Underwriters. The Firm Shares shall be registered in such name or names and in such authorized denominations as the Representative may request in writing at least two (2) full Business Days prior to the Closing Date. The Company shall not be obligated to sell or deliver the Firm Shares except upon tender of payment by the Representative for all of the Firm Shares. The term "**Business Day**" means any day other

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than a Saturday, a Sunday or a legal holiday or a day on which banking institutions are authorized or obligated by law to close in New York, New York.

1.2 Over-allotment Option.

1.2.1 Additional Shares. The Company hereby grants to the Underwriters an option (the "**Over-allotment Option**") to purchase up to an additional 472,500 shares of Common Stock, representing up to 15% of the Firm Shares sold in the Offering (the "**Additional Shares**"), for the purpose of

covering over-allotment of such securities, if any. The purchase price to be paid per Additional Share shall be equal to the price per Firm Share set forth in Section 1.1.1 hereof. The Firm Shares and the Additional Shares are hereinafter referred to together as the "**Public Securities**." The offering and sale of the Public Securities is herein referred to as the "**Offering**".

1.2.2 Exercise of Option. The Over-allotment Option granted pursuant to Section 1.2.1 hereof may be exercised by the Representative as to all (at any time) or any part (from time to time) of the Additional Shares within 45 days after the Effective Date. The Underwriters shall not be under any obligation to purchase any Additional Shares prior to the exercise of the Over-allotment Option. The Over-allotment Option granted hereby may be exercised by the giving of oral notice to the Company from the Representative, which shall be confirmed in writing by overnight mail or facsimile or other electronic transmission, setting forth the number of Additional Shares to be purchased and the date and time for delivery of and payment for the Additional Shares (the "**Option Closing Date**"), which shall not be later than five (5) full Business Days after the date of the notice or such other time as shall be agreed upon by the Company and the Representative, at the offices of Representative's Counsel or at such other place (including remotely by facsimile or other electronic transmission) as shall be agreed upon by the Company and the Representative. If such delivery and payment for the Additional Shares does not occur on the Closing Date, the Option Closing Date will be as set forth in the notice. Upon exercise of the Over-allotment Option with respect to all or any portion of the Additional Shares, subject to the terms and conditions set forth herein, (i) the Company shall become obligated to sell to the Underwriters the number of Additional Shares specified in such notice and (ii) each of the Underwriters, acting severally and not jointly, shall purchase that portion of the total number of Additional Shares then being purchased that the number of Firm Shares as set forth in Schedule 1 opposite the name of such Underwriter bears to the total number of Firm Shares, subject, in each case, to such adjustments as the Representative, in its sole discretion, shall determine.

1.2.3 Payment and Delivery. Payment for the Additional Shares shall be made on the Option Closing Date by wire transfer in federal (same day) funds, payable to the order of the Company upon delivery to you of certificates (in form and substance satisfactory to the Underwriters) representing the Additional Shares (or through the facilities of DTC for the account of the Underwriters). The Additional Shares shall be registered in such name or names and in such authorized denominations as the Representative may request in writing at least two (2) full Business Days prior to the Option Closing Date. The Company shall not be obligated to sell or deliver the Additional Shares except upon tender of payment by the Representative for applicable Additional Shares. The Option Closing Date may be simultaneous with, but not earlier than, the Closing Date; and in the event that such time and date are simultaneous with the Closing Date, the term "**Closing Date**" shall refer to the time and date of delivery of the Firm Shares and Additional Shares.

1.3 Representative's Warrants.

1.3.1 Purchase Warrants. The Company hereby agrees to issue and sell to the Representative (and/or its designees) on the Closing Date an option ("**Representative's Warrant**") for the purchase of an aggregate of 157,500 shares of Common Stock (which is equal to an aggregate of 5% of the Firm Shares sold in the Offering), for an aggregate purchase price of $100.00. The Representative's Warrant agreement, in the form attached hereto as Exhibit A (the "**Representative's Warrant Agreement**"), shall be exercisable, in whole or in part, commencing on a date which is one (1) year after the Effective Date and expiring on the five-year anniversary of the Effective Date at an initial exercise price per share of Common Stock of $8.75, which is equal to 125% of the public offering price of each Firm Share. The Representative's Warrant Agreement and the shares of Common Stock issuable upon exercise thereof are sometimes hereinafter referred to together as the "**Representative's Securities**." The Representative understands and agrees that there are significant restrictions pursuant to FINRA Rule 5110 against transferring the Representative's Warrant Agreement and the underlying shares of Common Stock during the one hundred eighty (180) days after the Effective Date and by its acceptance

thereof shall agree that it will not sell, transfer, assign, pledge or hypothecate the Representative's Warrant Agreement, or any portion thereof, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of such securities for a period of one hundred eighty (180) days following the Effective Date to anyone other than (i) an Underwriter or a selected dealer in connection with the Offering, or (ii) a bona fide officer or partner of the Representative or of any such Underwriter or selected dealer; and only if any such transferee agrees to the foregoing lock-up restrictions.

1.3.2 Delivery. Delivery of the Representative's Warrant Agreement shall be made on the Closing Date and shall be issued in the name or names and in such authorized denominations as the Representative may request.

2. Representations and Warranties of the Company. The Company represents and warrants to the Underwriters as of the Applicable Time (as defined below), as of the Closing Date and as of the Option Closing Date, if any, as follows:

2.1 Filing of Registration Statement.

2.1.1 Pursuant to the Securities Act.

(i) The Company has prepared and filed with the Securities and Exchange Commission (the "**Commission**") a registration statement, including the related preliminary prospectus or prospectuses, relating to the Public Securities under the Securities Act of 1933, as amended (the "**Securities Act**"), on Form S-1 (No. 333-198383) (the "**Initial Registration Statement**"); and such Initial Registration Statement, and any post-effective amendment thereto, each in the form previously delivered to you, have been declared effective by the Commission, in such form. Other than a registration statement, if any, increasing the size of the Offering (a "**Rule 462(b) Registration Statement**") filed pursuant to Rule 462(b) under the Securities Act, which will become effective upon filing, no other document with respect to the Initial Registration Statement has heretofore been filed with the Commission. The various parts of the Initial Registration Statement and the 462(b) Registration Statement, if any, including all exhibits thereto and including the information contained in the form of final prospectus filed with the Commission pursuant to Rule 424(b) under the Securities Act and deemed by virtue of Rule 430A under the Securities Act to be part of the Initial Registration Statement at the time it became effective under the Securities Act, each as amended at the time such part of the Initial Registration Statement or Rule 462(b) Registration Statement, if any, became or hereafter becomes effective under the Securities Act, are hereafter collectively referred to as the "**Registration Statement**."

All references in this agreement (this "**Agreement**") to the Registration Statement, the Rule 462(b) Registration Statement, any Preliminary Prospectus, Issuer Free Writing Prospectus or the Prospectus, or any amendments or supplements to any of the foregoing, shall be deemed to include any copy thereof filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System ("**EDGAR**"). For purposes of this Agreement, "**Applicable Time**" is [·][·] (New York City time) on the date of this Agreement.

(ii) The prospectus relating to the Public Securities and the Representative's Securities, in the form first filed with the Commission pursuant to Rule 424(b) under the Securities Act, is hereafter referred to as the "**Prospectus**." Any preliminary prospectus included in the Initial Registration Statement or filed with the Commission pursuant to Rule 424 under the Securities Act is hereafter referred to as a "**Preliminary Prospectus**"; and the Preliminary Prospectus relating to the Public Securities, if any, as amended or supplemented immediately prior to the Applicable

Time, is hereafter referred to as the "**Pricing Prospectus**." Any "issuer free writing prospectus" (as defined in Rule 433 under the Securities Act) relating to the Public Securities is hereafter referred to as an "**Issuer Free Writing Prospectus**"; and the Pricing Prospectus, as supplemented by the Issuer Free Writing Prospectuses, if any, listed in Schedule 2-B hereto, and the information included on Schedule 2A hereto, taken together, are hereafter referred to collectively as the "**Pricing Disclosure Package**." As used herein "**Testing-the-Waters Communication**" means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act and "**Written Testing-the-Waters Communication**" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act.

(iii) At the time of filing the Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or another offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2) of the Securities Act) of the Public Securities and at the date hereof, the Company was not and is not an "ineligible issuer," as defined in Rule 405.

(iv) Each Issuer Free Writing Prospectus conformed or will conform in all material respects to the requirements of the Securities Act and the regulations promulgated thereunder on the date of first use, and the Company has complied with the requirements of Rule 433 under the Securities Act with respect to each Issuer Free Writing Prospectus including, without limitation, all prospectus delivery, filing, record retention and legending requirements applicable to any such Issuer Free Writing Prospectus. The Company has not (i) distributed any offering material in connection with the Offering other than any Preliminary Prospectus, the Prospectus, and any Issuer Free Writing Prospectus set forth on Schedule II hereto, or (ii) filed, referred to, approved, used or authorized the use of any "free writing prospectus" as defined in Rule 405 under the Securities Act with respect to the Offering or the Public Securities, except for any Issuer Free Writing Prospectus set forth in Schedule 2-B hereto and any electronic road show previously approved by the Representative. The Company has retained in accordance with the Securities Act and the rules and regulations promulgated thereunder all Issuer Free Writing Prospectuses that were not required to be filed pursuant to the Securities Act and the rules and regulations promulgated thereunder. The Company has taken all actions necessary so that any "road show" (as defined in Rule 433 under the Securities Act) in connection with the offering of the Stock will not be required to be filed pursuant to the Securities Act and the rules and regulations thereunder.

2.1.2 Pursuant to the Exchange Act. The Company has filed with the Commission a Form 8-A (Accession No. 001-36714) providing for the registration pursuant to Section 12(b) under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), of the shares of Common Stock; and such Form 8-A has become effective under the Exchange Act. The Company has taken no action designed to, or likely to have the effect of, terminating the registration of the shares of Common Stock under the Exchange Act, nor has the Company received any notification that the Commission is contemplating terminating such registration.

2.1.3 Testing the Waters Communications

(i) Each Written Testing-the-Waters Communications did not, as of the Applicable Time, and at all times through the completion of the public offer and sale of the Public Securities will not, include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, the Pricing Disclosure Package or the Prospectus. Each Written Testing-the-Waters Communication did not, as of the Applicable Time, when taken together with the Pricing Disclosure Package, contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided* that no representation or warranty is made as to the Underwriters' Information (as defined in Section 2.4.1 below).

(ii) The Company (a) has not engaged in any Testing-the-Waters Communication other than Testing-the-Waters Communications with the consent of the Representative with entities that are qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act and (b) has not authorized anyone other than Guggenheim Securities, LLC, BMO Capital Markets Corp. and the Representative to engage in Testing-the-Waters Communications. The Representative hereby consents to the prior Testing-the-Waters Communications undertaken by Guggenheim Securities, LLC, and BMO Capital Markets Corp. The Company reconfirms that the Representative has been authorized to act on its behalf in undertaking Testing-the-Waters Communications. The Company has not distributed any Written Testing-the-Waters Communications other than those listed on Schedule IV hereto.

(iii) From the time of the initial confidential submission of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged directly or through any person authorized to act on its behalf in any Testing-the-Waters Communication) through the date hereof, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "**Emerging Growth Company**").

2.1.4 Road Show. The Company has filed publicly on EDGAR at least 21 calendar days prior to any "road show" (as defined in Rule 433 under the Securities Act), any confidentially submitted registration statement and registration statement amendments relating to the offer and sale of the Public Securities.

2.2 Stock Exchange Listing. The shares of Common Stock have been approved for listing on The NASDAQ Capital Market (the "**NasdaqCM**"), subject only to official notice of issuance.

2.3 No Stop Orders, etc. No stop order suspending the effectiveness of the Initial Registration Statement, any post-effective amendment thereto or the Rule 462(b) Registration Statement, if any, has been issued and no proceeding for that purpose has been initiated or, to the Company's knowledge, threatened by the Commission. No order preventing or suspending the use of any Preliminary Prospectus or the Prospectus has been issued and no proceeding for that purpose has been initiated or, to the Company's knowledge, threatened by the Commission. The Company has complied in all material respects with each request (if any) from the Commission for additional information.

2.4 Disclosures in Registration Statement.

2.4.1 Compliance with Securities Act and 10b-5 Representation.

(i) Each of the Registration Statement and any post-effective amendment thereto, at the time it became effective, complied in all material respects with the requirements of the Securities Act and the rules and regulations of the Commission thereunder (the "**Securities**

Act Regulations"). Each Preliminary Prospectus, the Prospectus and any amendment or supplement thereto, at the time each was filed with the Commission, complied in all material respects with the requirements of the Securities Act and the Securities Act Regulations. Each Preliminary Prospectus delivered to the Underwriters for use in connection with this offering and the Prospectus was or will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(ii) The Registration Statement, when it became effective, did not contain and, as amended or supplemented, if applicable, will not contain, as of the date of such amendment or supplement, an untrue statement of a material fact or omitted or will omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any information contained in or omitted from the Registration Statement or any amendment thereto in reliance upon and in conformity with information furnished in writing to the Company by or on behalf of any Underwriter through the Representative specifically for use therein. The parties acknowledge and agree that such information provided by or on behalf of any Underwriter consists solely of the following disclosure contained in the "Underwriting" section of the Prospectus: (a) the second sentence of the second paragraph under the heading "Discounts", (b) the first sentence under the heading "Stabilization" and (c) the third and fourth sentences of the second paragraph and the fourth paragraph under the heading "Certain Relationships" (collectively, the "**Underwriters' Information**").

(iii) The Pricing Disclosure Package, as of the Applicable Time, did not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Prospectus will not, as of its date, as of the Closing Date or as of any Option Closing Date, contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. Each Issuer Free Writing Prospectus complies in all material respects with the applicable provisions of the Securities Act and the Securities Act Regulations, and does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus, and each Issuer Free Writing Prospectus listed in Schedule 2-B hereto, as supplemented by and taken together with the Pricing Disclosure Package did not, as of the Applicable Time, contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. No representation and warranty is made in this Section 1(d) with respect to the Underwriters' Information.

2.4.2 Disclosure of Agreements. The agreements and documents described in the Registration Statement, the Pricing Disclosure Package and the Prospectus conform in all material respects to the descriptions thereof contained therein and there are no agreements or other documents required by the Securities Act and the Securities Act Regulations to be described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed.

2.4.3 Prior Securities Transactions. Since inception, no securities of the Company have been sold by the Company or by or on behalf of, or for the benefit of, any person or persons controlling, controlled by or under common control with the Company, except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Preliminary Prospectus.

2.4.4 Regulations. The statements set forth in the Pricing Prospectus and Prospectus under the caption "Description of Capital Stock," insofar as it purports to constitute a summary of the terms of the Common Stock, and under the captions "Shares Eligible for Future Sale," "Material U.S. Federal Income Tax Consequences to Non-U.S. Holders of Common Stock," "Certain Relationships and Related Person Transactions," "Business—Government Regulation," "Business—Legal Proceedings," "Business—Intellectual Property," "Underwriting," "Risk Factors—Risks Related to Intellectual Property—We are dependent upon our license agreement with Napo and if the agreement is terminated for any reason our business will be harmed," "Risk Factors—Risks Related to Intellectual Property—We currently do not own any issued patents, most of our intellectual property is licensed from Napo and we cannot be certain that our patent strategy will be effective to enhance marketing exclusivity," "Risk Factors—Risks Related to Intellectual Property—Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, which would be costly, time-consuming and, if successfully asserted against us, delay or prevent the development and commercialization of our current or future products and product candidates," "Risk Factors—Risks Related to Government Regulation—We do not believe that our non-prescription products are subject to regulation by regulatory agencies in the United States, but there is a risk that regulatory bodies may disagree with our 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," and the statements in the Registration Statement under Item 14 thereof, insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair in all material respects.

2.5 Changes After Dates in Registration Statement. Subsequent to the respective dates as of which information is given in the Registration Statement, the Pricing Disclosure Package or the Prospectus, except as disclosed therein, (i) the Company has not declared or paid any dividends, or made any other distribution of any kind, on or in respect of its capital stock, (ii) there has not been any material change in the capital stock or long-term or short-term debt of the Company, (iii) there have been no transactions entered into by the Company, other than in the ordinary course of business, which are material with respect to the Company, individually or taken as a whole, (iv) the Company has not sustained any material loss or interference with its business or properties from fire, explosion, flood, earthquake, hurricane, accident or other calamity, whether or not covered by insurance, or from any labor dispute or any legal or governmental proceeding, and (v) there has not been any material adverse change or any development involving a prospective material adverse change, whether or not arising from transactions in the ordinary course of business, in or affecting the business, general affairs, management, condition (financial or otherwise), results of operations, stockholders' equity, properties or prospects of the Company, individually or taken as a whole (a "**Material Adverse Change**"). Since the date of the latest balance sheet included in the Registration Statement, the Pricing Disclosure Package or the Prospectus, the Company has not incurred or undertaken any liabilities or obligations, whether direct or indirect, liquidated or contingent, matured or unmatured, or entered into any transactions, including any acquisition or disposition of any business or asset, which are material to the Company, individually or taken as a whole, except for liabilities, obligations and transactions which are disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

2.6 Independent Accountants. BDO USA, LLP (the "**Auditor"**), who has certified the financial statements and supporting schedules and information of the Company that are included in the Registration Statement, the Pricing Disclosure Package or the Prospectus are independent public accountants as required by the Securities Act, the Securities Act Regulations and the rules of the Public Company Accounting Oversight Board ("**PCAOB**"). The Auditor has not, during the periods covered by the financial statements included in the Registration Statement, the Pricing Disclosure Package and the Prospectus, provided to the Company any non-

audit services, as such term is used in Section 10A(g) of the Exchange Act.

2.7 Financial Statements, etc. The financial statements, including the notes thereto, and the supporting schedules included in the Registration Statement, the Pricing Disclosure Package and the Prospectus present fairly in all material respects the consolidated financial position as of the dates indicated and the cash flows and results of operations for the periods specified of the Company; except as otherwise stated in the Registration Statement, the Pricing Disclosure Package and the Prospectus, said financial statements have been prepared in conformity with United States generally accepted accounting principles ("**GAAP**") applied on a consistent basis throughout the periods involved; and the supporting schedules, if any, included in the Registration Statement, the Pricing Disclosure Package and the Prospectus present fairly in all material respects in accordance with GAAP the information required to be stated therein. No other historical or pro forma financial statements or supporting schedules are required to be included in the Registration Statement, the Pricing Disclosure Package or the Prospectus by the Securities Act or the Securities Act Regulations. The other financial and statistical information included in the Registration Statement, the Pricing Disclosure Package and the Prospectus present fairly in all material respects the information included therein and have been prepared on a basis consistent with that of the financial statements that are included in the Registration Statement, the Pricing Disclosure Package and the Prospectus and the books and records of the respective entities presented therein. The pro forma financial statements included in the Registration Statement, Pricing Disclosure Package and the Prospectus have been properly compiled and prepared in accordance with the applicable requirements of the Securities Act and the Securities Act Regulations and include all adjustments necessary to present fairly in all material respects in accordance with GAAP the pro forma financial position of the respective entity or entities presented therein at the respective dates indicated and their cash flows and the results of operations for the respective periods specified. All disclosures contained in the Registration Statement, the Pricing Disclosure Package or the Prospectus regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission), if any, comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K of the Securities Act, to the extent applicable. Each of the Registration Statement, the Pricing Disclosure Package and the Prospectus discloses all material off-balance sheet transactions, arrangements, obligations (including contingent obligations), and other relationships of the Company with unconsolidated entities or other persons that may have a material current or future effect on the Company's financial condition, changes in financial condition, results of operations, liquidity, capital expenditures, capital resources, or significant components of revenues or expenses. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, (a) the Company has not incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions other than in the ordinary course of business, (b) the Company has not declared or paid any dividends or made any distribution of any kind with respect to its capital stock, (c) there has not been any change in the capital stock of the Company, (d) other than in the ordinary course of business and consistent with the Company's prior policies, made any grants under any stock compensation plan, and (e) there has not been any material adverse change in the Company's long-term or short-term debt.

2.8 Authorized Capital; Options, etc. The Company had, at the date or dates indicated in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the duly authorized, issued and outstanding capitalization as set forth therein. Based on the assumptions stated in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company will have on the Closing Date the adjusted stock capitalization set forth therein. Except as set forth in, or contemplated by, the Registration Statement, the Pricing Disclosure Package and the Prospectus, on the Applicable Time, as of the Applicable Time and on the Closing Date and any Option Closing Date, there will be no stock options, warrants, or other rights to purchase or otherwise acquire any authorized but unissued shares of Common Stock of the Company or any security convertible or exercisable into shares of Common Stock of the Company, or any contracts or commitments to issue or sell shares of Common Stock or any such options, warrants, rights or convertible securities.

2.9 Valid Issuance of Securities, etc.

2.9.1 Outstanding Securities. All issued and outstanding securities of the Company issued prior to the transactions contemplated by this Agreement have been duly authorized and validly issued and are fully paid and non-assessable; the holders thereof have no contractual rights of rescission or put rights with respect thereto, and are not subject to personal liability by reason of being such holders; and none of such securities were issued in violation of the preemptive rights, rights of first refusal or rights of participation of any

holders of any security of the Company or similar contractual rights granted by the Company, except for such rights as may have been fully satisfied or waived prior to the Effective Date. The authorized shares of Common Stock conform in all material respects to all statements relating thereto contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus. The offers and sales of the outstanding shares of Common Stock, options, warrants and other rights to purchase or exchange such securities for shares of the Common Stock were at all relevant times either registered under the Securities Act and the applicable state securities or "blue sky" laws or, based in part on the representations and warranties of the purchasers of such shares of Common Stock, exempt from such registration requirements.

2.9.2 Securities Sold Pursuant to this Agreement. The Public Securities and Representative's Securities have been duly authorized for issuance and sale and, when issued and paid for, will be validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders; the Public Securities and Representative's Securities are not and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company; and all corporate action required to be taken for the authorization, issuance and sale of the Public Securities and Representative's Securities has been duly and validly taken. The Public Securities and Representative's Securities conform in all material respects to all statements with respect thereto contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus. All corporate action required to be taken for the authorization, issuance and sale of the Representative's Warrant Agreement has been duly and validly taken; the shares of Common Stock issuable upon exercise of the Representative's Warrant have been duly authorized and reserved for issuance by all necessary corporate action on the part of the Company and, when paid for and issued in accordance with the Representative's Warrant and the Representative's Warrant Agreement, such underlying shares of Common Stock will be validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders; and such shares of Common Stock are not and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company.

2.10 Registration Rights of Third Parties. Except as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus, no holders of any securities of the Company or any options, warrants, rights or other securities exercisable for or convertible or exchangeable into securities of the Company have the right to require the Company to register any such securities of the Company under the Securities Act or to include any such securities in the Registration Statement or any other registration statement to be filed by the Company, except for any such rights so disclosed that have either been fully complied with by the Company or effectively waived by the holders thereof.

2.11 Validity and Binding Effect of Agreements. The execution, delivery and performance of this Agreement and the Representative's Warrant Agreement have been duly and validly authorized by the Company, and, when executed and delivered, will constitute, the valid and binding agreements of the Company, enforceable against the Company in accordance with their respective terms, except: (i) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally; (ii) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws; and (iii) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

2.12 No Conflicts, etc. The execution, delivery and performance by the Company of this Agreement, the Representative's Warrant Agreement and all ancillary documents, the consummation by the Company of the transactions herein and therein contemplated and the compliance by the Company with the terms hereof and thereof do not and will not, with or without the giving of notice or the lapse of time or both: (i) result in a material breach of, or conflict with any of the terms and provisions of, or constitute a material default under, or result in the creation, modification, termination or imposition of any lien, charge, mortgage, pledge, security interest, claim, equity, trust or other encumbrance, preferential arrangement, defect or restriction of any kind whatsoever (any "**Lien**") upon any property or assets of the Company pursuant to the terms of any indenture, mortgage, deed of trust, note, lease, loan agreement or any other agreement or instrument, franchise, license or permit to which the Company is a party or as to which any property of the Company is a party; (ii) result in any violation of the provisions of the Company's Certificate of Incorporation (as the same have been amended or

restated from time to time, the "**Charter**") or the by-laws of the Company (as the same may be amended or restated from time to time); or (iii) violate any existing applicable law, rule, regulation, ordinance, directive, judgment, writ, order or decree of any governmental, judicial, regulatory or administrative agency, body or court, domestic or foreign, having jurisdiction over the Company or any of its assets or business (each, a "**Governmental Entity**") as of the date hereof (including, without limitation, those promulgated by the Food and Drug Administration of the U.S. Department of Health and Human Services (the "**FDA**") or by any foreign, state or local Governmental Entity performing functions similar to those performed by the FDA), except in the cases of clauses (i) and (iii) for such breaches, conflicts or violations which could not reasonably be expected to have a Material Adverse Change.

2.13 No Defaults; Violations. The Company is not (i) in violation of its Charter, by-laws, or other organizational documents, (ii) in default under, and no event has occurred which, with notice or lapse of time or both, would constitute a default under or result in the creation or imposition of any Lien upon any property or assets of the Company pursuant to any indenture, mortgage, deed of trust, note, lease, loan agreement or other agreement or instrument to which it is a party or by which it is bound or to which any of its property or assets is subject, or (iii) in violation of any statute, law, rule, regulation, ordinance, directive, judgment, writ, decree or order of any court or judicial, regulatory or other legal or Governmental Entity, except (in the case of clauses (ii) and (iii) above) for violations or defaults that could not (individually or in the aggregate) reasonably be expected to have a Material Adverse Effect.

2.14 Corporate Power; Licenses; Authorizations.

2.14.1 Conduct of Business. The Company has all requisite power and authority, and all necessary consents, approvals, authorizations, orders, registrations, qualifications, licenses, filings and permits of, with and from all Governmental Entities and all third parties, foreign and domestic (collectively, the "**Authorizations**"), to own, lease and operate its properties and conduct its business as it is now being conducted and as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, and each such Authorization is valid and in full force and effect, except in each case as could not reasonably be expected to have a Material Adverse Effect. The Company has not received notice of any investigation or proceedings which, if decided adversely to the Company, could reasonably be expected to result in, the revocation of, or imposition of a materially burdensome restriction on, any such Authorization.

2.14.2 Transactions Contemplated Herein. The Company has all corporate power and authority to enter into this Agreement and to carry out the provisions and conditions hereof, and all Authorizations required in connection therewith have been obtained. No Authorization of, and no filing with, Governmental Entity is required for the valid issuance, sale and delivery of the Public Securities and the consummation of the transactions and agreements contemplated by this Agreement and the Representative's Warrant Agreement and as contemplated by the Registration Statement, the Pricing Disclosure Package and the Prospectus, except as may be required under state securities or blue sky laws or the by-laws the rules and regulations of the Financial Industry Regulatory Authority, Inc. ("**FINRA**") in connection with the purchase and distribution of the Public Securities by the Underwriters, each of which has been obtained and is in full force and effect.

2.15 D&O Questionnaires. To the Company's knowledge, all information contained in the questionnaires (the "**Questionnaires**") completed by each of the Company's directors, officers and principal stockholders immediately prior to the Offering (the "**Insiders**") as supplemented by all information concerning the Company's directors, officers and principal stockholders as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, provided to the Underwriters is true and correct in all material respects and the Company has not become aware of any information which would cause the information disclosed in the Questionnaires to become inaccurate and incorrect in any material respect.

2.16 Litigation; Governmental Proceedings. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there is no judicial, regulatory, arbitral or other legal or governmental proceeding or other litigation or arbitration, domestic or foreign, pending to which the Company is a party or of which any property, operations or assets of the Company is the subject which, individually or in the aggregate, if determined adversely to the Company, could reasonably be expected to have a Material Adverse Effect, or which might materially and adversely affect the consummation of the transactions contemplated in this Agreement or the performance by the Company of its obligations hereunder; to the Company's knowledge, no

such proceeding, litigation or arbitration is threatened or contemplated; and the defense of all such proceedings, litigation and arbitration against or involving the Company could not reasonably be expected to have a Material Adverse Effect.

2.17 Good Standing. The Company has been duly organized and is validly existing as a corporation and is in good standing under the laws of its jurisdiction of incorporation. The Company is duly qualified to do business and is in good standing as a foreign corporation in each jurisdiction in which the character or location of its properties (owned, leased or licensed) or the nature or conduct of its business makes such qualification necessary, except for those failures to be so qualified or in good standing which (individually and in the aggregate) could not reasonably be expected to have a material adverse effect on (i) the business, general affairs, management, condition (financial or otherwise), results of operations, stockholders' equity, properties or prospects of the Company, taken as a whole; or (ii) the ability of the Company to consummate the Offering or any other transaction contemplated by this Agreement or the Registration Statement, the Pricing Disclosure Package and the Prospectus (a "**Material Adverse Effect**"). The Charter, by-laws or other constitutive and organizational documents of the Company comply with the requirements of applicable law and are in full force and effect.

2.18 Insurance. The Company maintains insurance in such amounts and covering such risks as the Company reasonably considers adequate for the conduct of its business and the value of its properties and as is customary for companies engaged in similar businesses in similar industries, all of which insurance is in full force and effect, except where the failure to maintain such insurance could not reasonably be expected to have a Material Adverse Effect. There are no material claims by the Company under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause. The Company reasonably believes that it will be able to renew its existing insurance as and when such coverage expires or will be able to obtain replacement insurance adequate for the conduct of the business and the value of its properties at a cost that would not have a Material Adverse Effect.

2.19 Transactions Affecting Disclosure to FINRA.

2.19.1 Finder's Fees. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no claims, payments, contracts, arrangements, agreements or understandings between the Company and any person that would give rise to a valid claim against the Company or any Underwriter for a brokerage commission, finder's fee or other like payment in connection with the transactions contemplated by this Agreement or, to the Company's knowledge, any arrangements, agreements, understandings, payments or issuance with respect to the Company or any of its officers, directors, stockholders, partners, employees or affiliates that may affect the Underwriters' compensation as determined by FINRA.

2.19.2 Payments Within Six (6) Months. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to: (i) any person, as a finder's fee, consulting fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company; (ii) any FINRA member; or (iii) any person or entity that has any direct or indirect affiliation or association with any FINRA member, within the six (6) months prior to the initial filing of the Registration Statement, other than the payment to the Underwriters as provided hereunder in connection with the Offering.

2.19.3 Use of Proceeds. None of the net proceeds of the Offering will be paid by the Company to any participating FINRA member or its affiliates, except as specifically described in the Registration Statement.

2.19.4 FINRA Affiliation. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there is no (i) officer or director of the Company, (ii) beneficial owner of 5% or more of any class of the Company's securities or (iii) beneficial owner of the Company's unregistered equity securities which were acquired during the 180-day period immediately preceding the filing of the Registration Statement that is an affiliate or associated person of a FINRA member participating in the Offering (as determined in accordance with the rules and regulations of FINRA). Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company (i) does not have any material lending or other relationship with any bank or lending affiliate of any Underwriter and (ii) does not intend to use

any of the proceeds from the sale of the Public Securities to repay any outstanding debt owed to any affiliate of any Underwriter.

2.19.5 Information. All information provided by the Company in its FINRA questionnaire to Representative's Counsel specifically for use by Representative's Counsel in connection with its Public Offering System filings (and related disclosure) with FINRA is true, correct and complete in all material respects.

2.20 Foreign Corrupt Practices Act. None of the Company, any director or officer of the Company, or, to the knowledge of the Company, any agent, employee, affiliate or other person acting on behalf of the Company, has (i) made any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made any direct or indirect unlawful payment to any domestic governmental official, "foreign official" (as defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (collectively, the "**FCPA**") or employee; (iii) violated or is in violation of any provision of the FCPA or any applicable non-U.S. anti-bribery statute or regulation; (iv) made any bribe, rebate, payoff, influence payment, kickback or other unlawful payment; and (v) received notice of any investigation, proceeding or inquiry by any Governmental Entity regarding any of the matters in clauses (i)-(iv) above; and the Company and, to the knowledge of the Company, the Company's affiliates have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

2.21 Compliance with OFAC. None of the Company, any director or officer of the Company, or, to the knowledge of the Company, any agent, employee, affiliate or other person acting on behalf of the Company, is currently the subject or target of any sanctions administered or enforced by the United States Government, including, without limitation, the U.S. Department of the Treasury's Office of Foreign Assets Control ("**OFAC**"), the U.S. Department of State, the United Nations Security Council, the European Union, Her Majesty's Treasury, or other relevant sanctions authority (collectively, "**Sanctions**"), nor is the Company located, organized or resident in a country or territory that is the subject of Sanctions; and the Company will not directly or indirectly use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any joint venture partner or other person or entity, for the purpose of financing the activities of or business with any person, or in any country or territory, that currently is the subject or target of any U.S. sanctions administered by OFAC or in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of Sanctions.

2.22 Money Laundering Laws. The operations of the Company are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines issued, administered or enforced by any Governmental Entity (collectively, the "**Money Laundering Laws**") and no action, suit or proceeding by or before any Governmental Entity or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

2.23 Forward-Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained in either the Registration Statement, Pricing Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

2.24 Officers' Certificate. Any certificate signed by any duly authorized officer of the Company and delivered to you or to Representative's Counsel shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

2.25 Lock-Up Agreements. Schedule 3 hereto contains a complete and accurate list of each of the Company's officers, directors and each owner of the Company's outstanding shares of Common Stock (or securities convertible into or exercisable for shares of Common Stock) (collectively, the "**Lock-Up Parties**"). The Company has caused each of the Lock-Up Parties to deliver to the Representative an executed Lock-Up Agreement, in the form attached hereto as Exhibit B (the "**Lock-Up Agreement**"), prior to the execution of this Agreement.

2.26 Subsidiaries. The Company has no "subsidiaries" (within the meaning of Rule 405 under the Securities Act). The Company does not own, directly or indirectly, any shares of stock or any other equity or long-term debt securities of any other corporation or have any equity interest in any other

corporation, partnership, joint venture, association, trust or other entity.

2.27 Related Party Transactions.

2.27.1 Business Relationships. There are no business relationships or related party transactions involving the Company or any other person required to be described in the Pricing Disclosure Package and the Prospectus that have not been described. Without limiting the generality of the immediately preceding sentence, no relationship, direct or indirect, exists between or among the Company on the one hand, and the directors, officers or stockholders of the Company on the other hand, that is required to be described in the Pricing Disclosure Package and the Prospectus and that is not so described. Since inception, the Company has not, directly or indirectly, extended or maintained credit, arranged to extend credit, or renewed any extension of credit, in the form of a personal loan, to or for any director or executive officer of the Company, or to or for any family member or affiliate of any director or executive officer of the Company.

2.27.2 No Unconsolidated Entities. There are no transactions, arrangements or other relationships between and/or among the Company, any of its affiliates (as such term is defined in Rule 405 of the Securities Act) and any unconsolidated entity, including, but not limited to, any structure finance, special purpose or limited purpose entity that could reasonably be expected to materially affect the Company's liquidity or the availability of or requirements for its capital resources required to be described in the Pricing Disclosure Package and the Prospectus or a document incorporated by reference therein which have not been described as required.

2.28 Board of Directors. The Board of Directors of the Company is comprised of the persons set forth under the heading of the Pricing Prospectus and the Prospectus captioned "Management." The qualifications of the persons serving as board members and the overall composition of the board comply with the Exchange Act and the rules and regulations of the Commission promulgated thereunder (the "**Exchange Act Regulations**"), the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder (the **"Sarbanes-Oxley Act**") applicable to the Company and the listing rules of the NASDAQ Stock Market LLC. At least one member of the Audit Committee of the Board of Directors of the Company qualifies as an "audit committee financial expert," as such term is defined under Regulation S-K and the listing rules of the NASDAQ Stock Market LLC. In addition, at least a majority of the persons serving on the Board of Directors qualify as "independent," as defined under the listing rules of the NASDAQ Stock Market LLC.

2.29 Sarbanes-Oxley Compliance.

2.29.1 Disclosure Controls. The Company has developed and currently maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act Regulations) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective.

2.29.2 Compliance. The Company has taken all necessary actions to ensure that, upon the effectiveness of the Registration Statement, it will be in compliance with all provisions of the Sarbanes-Oxley Act with which the Company is required to comply as of the effectiveness of the Registration Statement, and is taking all steps necessary to ensure that it will at all times be in compliance with other provisions of the Sarbanes-Oxley Act as and when the same become applicable to the Company after the effectiveness of the Registration Statement.

2.30 Accounting Controls. The Company maintains a system of "internal control over financial reporting" (as defined under Rules 13a-15(f) under the Exchange Act Regulations) that complies with the requirements of the Exchange Act and have been designed by, or under the supervision of, their respective principal executive and principal financial officers, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, including, but not limited to, internal accounting controls sufficient to

provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company is not aware of any material weaknesses in its internal controls. The Company's auditors and the Audit Committee of the Board of Directors of the Company have been advised of: (i) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are known to the Company's management and that have adversely affected or are reasonably likely to adversely affect the ability of the Company to record, process, summarize and report financial information; and (ii) any fraud known to the Company's management, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls over financial reporting. Since the date of the latest audited financial statements included in the Pricing Disclosure Package, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

2.31 No Investment Company Status. The Company is not and, at all times up to and including consummation of the transactions contemplated by this Agreement, and after giving effect to application of the net proceeds of the Offering as described in the Pricing Disclosure Package and the Prospectus, will not be, required to register as an "investment company" under the Investment Company Act of 1940, as amended, and is not and will not be an entity "controlled" by an "investment company" within the meaning of such act.

2.32 No Labor Disputes. No labor disturbance by the employees of the Company exists or, to the best of the Company's knowledge, is imminent and the Company is not aware of any existing or imminent labor disturbances by the employees of any of its principal suppliers, manufacturers' customers or contractors, which, in either case (individually or in the aggregate), could reasonably be expected to have a Material Adverse Effect.

2.33 Intellectual Property Rights.

(i) Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company (i) owns or possesses the right to use all patents, patent applications, trademarks, service marks, domain names, trade names, trademark registrations, service mark registrations, copyrights, formulae, customer lists, and know-how and other intellectual property (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) (collectively, "**Intellectual Property**") necessary for the conduct of its business substantially as presently conducted and as currently proposed to be conducted as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, (ii) has no reason to believe that the conduct of its business does or will conflict with any Intellectual Property of any third party in any material respect; and the Company has not received any notice of any claim of material conflict with any such Intellectual Property of others. To the Company's knowledge, all material technical information developed by and belonging to the Company that has not been patented has been kept confidential. To the Company's knowledge, there is no

infringement, misappropriation, or other violation by third parties of any such Intellectual Property; there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the Company's rights in or to such Intellectual Property, and the Company is unaware of any facts that would form a reasonable basis for any such claim; and there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others that the Company infringes, misappropriates, or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any other fact that would form a reasonable basis for any such claim. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, (x) the Company has not granted, licensed or assigned to any other person or entity any right to manufacture, have manufactured, assemble or sell the current products of the Company or those products or product candidates described in the Registration Statement, the Pricing Disclosure Package and the Prospectus and (y) to the Company's knowledge, there are no rights of third parties, including liens, security interests or other encumbrances, to the Intellectual Property necessary for the conduct of its business substantially as presently conducted or as currently proposed to be conducted as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(ii) All licenses for the use of the Intellectual Property described in the Registration Statement, the Pricing Disclosure Package and the Prospectus are in full force and effect in all material respects and are enforceable against the Company and, to the Company's knowledge, the other parties thereto, in accordance with their terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought. None of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the Company's knowledge, any other party is in default thereunder and, to the Company's knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a default thereunder.

2.34 Taxes. The Company has accurately prepared and timely filed all federal, state, foreign and other tax returns that are required to be filed by it and has paid or made provision for the payment of all taxes, assessments, governmental or other similar charges, including without limitation, all sales and use taxes and all taxes which the Company is obligated to withhold from amounts owing to employees, creditors and third parties, with respect to the periods covered by such tax returns (whether or not such amounts are shown as due on any tax return), except where the failure to timely file any such tax return or pay any such tax would not result in a Material Adverse Effect. No deficiency assessment with respect to a proposed adjustment of the Company's federal, state, local or foreign taxes is pending or, to the best of the Company's knowledge, threatened. The accruals and reserves on the books and records of the Company in respect of tax liabilities for any taxable period not finally determined are adequate to meet any assessments and related liabilities for any such period and, since the date of most recent audited financial statements, the Company has not incurred any liability for taxes other than in the ordinary course of its business. There is no tax lien, whether imposed by any federal, state, foreign or other taxing authority, outstanding against the assets, properties or business of the Company.

2.35 Compliance with Environmental Laws. There has been no storage, generation, transportation, handling, use, treatment, disposal, discharge, emission, contamination, release or other activity involving any kind of hazardous, toxic or other wastes, pollutants, contaminants, petroleum products or other hazardous or toxic substances, chemicals or materials ("**Hazardous Substances**") by, due to, on behalf of, or caused by the Company (or, to the Company's knowledge, any other entity for whose acts or omissions the Company is or may be liable) upon any property now or previously owned, operated, used or leased by the Company, or upon any other property, which would be a violation of or give rise to any liability under any applicable law, rule, regulation, order, judgment, decree or permit, common law provision or other legally binding standard relating to pollution or protection of human health and the environment ("**Environmental Law**"), except for violations and liabilities which, individually or in the aggregate, could not reasonably be expected to have a Material Adverse Effect. There has been no disposal, discharge, emission contamination or other release of any kind at, onto or from any such property or into the environment surrounding any such property of any Hazardous Substances with respect to which the Company has knowledge, except as could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has not agreed to assume, undertake or provide indemnification for any liability of any other person under any Environmental Law, including any obligation for cleanup or remedial action, except as could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. There is no pending or, to the best of the Company's knowledge, threatened administrative, regulatory or judicial action, claim or notice of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company. No property of the Company is subject to any Lien under any Environmental Law. The Company is not subject to any order, decree, agreement or other individualized legal requirement related to any Environmental Law.

2.36 ERISA Compliance. (i) Each "employee benefit plan" (within the meaning of Section 3(3) of the Employee Retirement Security Act of 1974, as amended ("**ERISA**")) for which the Company or any member of its "Controlled Group" (defined as any organization which is a member of a controlled group of corporations within the meaning of Section 414 of the Internal Revenue Code of 1986, as amended (the "**Code**")) would have any liability (each a "**Plan**") has been maintained in compliance with its terms and with the requirements of all applicable statutes, rules and regulations including ERISA and the Code; (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan excluding transactions effected pursuant to a statutory or administrative exemption; (iii) with respect to each Plan subject to

Title IV of ERISA (A) no "reportable event" (within the meaning of Section 4043(c) of ERISA) has occurred or is reasonably expected to occur, (B) no "accumulated funding deficiency" (within the meaning of Section 302 of ERISA or Section 412 of the Code), whether or not waived, has occurred or is reasonably expected to occur, (C) the fair market value of the assets under each Plan exceeds the present value of all benefits accrued under such Plan (determined based on those assumptions used to fund such Plan), and (D) neither the Company or any member of its Controlled Group has incurred, or reasonably expects to incur, any liability under Title IV of ERISA (other than contributions to the Plan or premiums to the Pension Benefit Guaranty Corporation in the ordinary course and without default) in respect of a Plan (including a "multiemployer plan," within the meaning of Section 4001(c)(3) of ERISA); and (iv) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification.

2.37 Compliance with Laws. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, and except as could not, individually or in the aggregate, have or reasonably be expected to have a Material Adverse Effect: (i) the Company has not received any notice of adverse filing, warning letter, untitled letter or other correspondence or notice from the Center for Veterinary Medicine of the U.S. Food and Drug Administration or the Center for Veterinary Biologics of the U.S. Department of Agriculture, or any other court or arbitrator or federal, state, local or foreign governmental or regulatory authority, alleging or asserting noncompliance with the Federal Food, Drug and Cosmetic Act (21 U.S.C. § 301 et seq.) (the "**FFDCA**"), the Animal Drug User Fee Act ("**ADUFA**"), the Virus Serum Toxin Act ("**VSTA**"), the Controlled Substances Act ("**CSA**") or similar applicable law; (ii) the Company is and has been in compliance with applicable veterinary medicine laws, including without limitation, the FFDCA, ADUFA, VSTA, the CSA and the federal Anti-Kickback Statute (42 U.S.C. § 1320a-7b(b)), and the regulations promulgated pursuant to such laws, and comparable state laws, and all other local, state, federal,

national, supranational and foreign laws and administrative guidance relating to the regulation of the Company (collectively, "**Veterinary Medicine Laws**"); (iii) the Company possesses all licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Veterinary Medicine Laws to carry on its businesses as now or proposed to be conducted ("**Authorizations**") and such Authorizations are valid and in full force and effect and the Company is not in violation of any term of any such Authorizations; (iv) the Company has not received notice of any ongoing claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any U.S. or non-U.S. Governmental Entity or third party alleging that any product operation or activity is in violation of any Veterinary Medicine Laws or Authorizations and has no knowledge that any such Governmental Entity or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (v) the Company has not received notice that any Governmental Entity has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations and has no knowledge that any such Governmental Entity is considering such action; (vi) the Company has filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Veterinary Medicine Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete, correct and not misleading on the date filed (or were corrected or supplemented by a subsequent submission if required by law); and (vii) the Company has not, either voluntarily or involuntarily, initiated, conducted, or issued or caused to be initiated, conducted or issued, any recall, market withdrawal or replacement, safety alert, post sale warning, "dear doctor" letter, or other notice or action relating to any alleged product defect or violation and, to the Company's knowledge, no third party has initiated or conducted any such notice or action.

2.38 Smaller Reporting Company. As of the time of filing of the Registration Statement, the Company was a "smaller reporting company," as defined in Rule 12b-2 of the Exchange Act Regulations.

2.39 Industry Data. The statistical, industry related and market-related data included in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus are based on or derived from sources that the Company reasonably and in good faith believes are reliable and accurate or represent the Company's good faith estimates that are made on the basis of data derived from such sources, and such data agree with the sources from which they are derived.

2.40 Margin Securities. The Company does not own any "margin securities" as that term is defined in Regulation U of the Board of Governors of the Federal Reserve System (the "**Federal Reserve Board**"), and

none of the proceeds of the Offering will be used, directly or indirectly, for the purpose of purchasing or carrying any margin security, for the purpose of reducing or retiring any indebtedness which was originally incurred to purchase or carry any margin security or for any other purpose which might cause any of the shares of Common Stock to be considered a "purpose credit" within the meanings of Regulation T, U or X of the Federal Reserve Board.

2.41 Research, Testing and Studies. The research, studies and tests conducted by or on behalf of the Company have been and, if still pending, are being conducted with reasonable care and in accordance with experimental protocols, procedures and controls pursuant to all Veterinary Medicine Laws and Authorizations; the descriptions of the results of such research, studies and tests contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus are accurate and complete in all material respects and fairly present the data derived from such research, studies, and tests; except to the extent disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company is not aware of any research, studies or tests, the results of which the Company believes reasonably call into question the research, study or test results described or referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus when viewed in the context in which such results are described; and the Company has not received any notices or correspondence from any Governmental Entity requiring the termination, suspension or material modification of any research, study or test conducted by or on behalf of the Company. To the knowledge of the Company, there have been no material adverse episodes or complications resulting from any research, study or test conducted by or on behalf of the Company.

2.42 Integration. Neither the Company, nor any of its affiliates, nor any person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause the Offering to be integrated with prior offerings by the Company for purposes of the Securities Act that would require the registration of any such securities under the Securities Act.

2.43 Title to Real and Personal Property. The Company owns or leases all such properties as are necessary to the conduct of its business as presently operated and as proposed to be operated as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus. The Company has good and marketable title in fee simple to all real property and good and marketable title to all personal property owned by it, in each case free and clear of any and all Liens except such as are described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or such as do not (individually or in the aggregate) materially affect the value of such property or materially interfere with the use made or proposed to be made of such property by the Company; and any real property and buildings held under lease or sublease by the Company are held by them under valid, subsisting and enforceable leases with such exceptions as are not material to, and do not materially interfere with, the use made and proposed to be made of such property and buildings by the Company. The Company has not received any notice of any claim adverse to its ownership of any real or personal property or of any claim against the continued possession of any real property, whether owned or held under lease or sublease by the Company.

2.44 Confidentiality and Non-Competitions. To the Company's knowledge, no director, officer, key employee or consultant of the Company is subject to any confidentiality, non-disclosure, non-competition agreement or non-solicitation agreement with any employer or prior employer that could materially affect his ability to be and act in his respective capacity of the Company or be expected to result in a Material Adverse Change.

2.45 Corporate Records. The minute books of the Company have been made available to the Underwriters and counsel for the Underwriters, and such books (i) contain minutes of all material meetings and actions of the board of directors (including each board committee) and stockholders of the Company, and (ii) reflect all material transactions referred to in such minutes.

2.46 No Stabilization. Neither the Company nor any of its affiliates (within the meaning of Rule 144 under the Securities Act) has taken, directly or indirectly, any action which constitutes or is designed to cause or result in, or which could reasonably be expected to constitute, cause or result in, the stabilization or manipulation of the price of any security to facilitate the sale or resale of the Public Securities or to result in a violation of Regulation M under the Exchange Act.

3. Covenants of the Company. The Company covenants and agrees as follows:

3.1 Amendments to Registration Statement. The Company shall deliver to the Representative, prior to filing, any amendment or supplement to the Registration Statement or Prospectus proposed to be filed after the Effective Date and not file any such amendment or supplement to which the Representative shall reasonably object in writing.

3.2 Federal Securities Laws.

3.2.1 Compliance. The Company, subject to Section 3.2.2, shall comply with the requirements of Rule 430A of the Securities Act Regulations, and will notify the Representative promptly, and confirm the notice in writing, (i) when any post-effective amendment to the Registration Statement shall become effective or any amendment or supplement to the Prospectus shall have been filed; (ii) of the receipt of any comments from the Commission; (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or for additional information; (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment or of any order preventing or suspending the use of any Preliminary Prospectus or the Prospectus, or of the suspension of the qualification of the Public Securities and Representative's Securities for offering or sale in any jurisdiction, or of the initiation or threatening of any proceedings for any of such purposes or of any examination pursuant to Section 8(d) or 8(e) of the Securities Act concerning the Registration Statement; and (v) if the Company becomes the subject of a proceeding under Section 8A of the Securities Act in connection with the Offering of the Public Securities and Representative's Securities. The Company shall effect all filings required under Rule 424(b) of the Securities Act Regulations, in the manner and within the time period required by Rule 424(b) (without reliance on Rule 424(b)(8)), and shall take such steps as it deems necessary to ascertain promptly whether the form of prospectus transmitted for filing under Rule 424(b) was received for filing by the Commission and, in the event that it was not, it will promptly file such prospectus. The Company shall use its best efforts to prevent the issuance of any stop order, prevention or suspension and, if any such order is issued, to obtain the lifting thereof at the earliest possible moment.

3.2.2 Continued Compliance. The Company shall comply with the Securities Act, the Securities Act Regulations, the Exchange Act and the Exchange Act Regulations so as to permit the completion of the distribution of the Public Securities as contemplated in this Agreement and in the Registration Statement, the Pricing Disclosure Package and the Prospectus. If at any time when a prospectus relating to the Public Securities is (or, but for the exception afforded by Rule 172 of the Securities Act Regulations ("**Rule 172**"), would be) required by the Securities Act to be delivered in connection with sales of the Public Securities, any event shall occur or condition shall exist as a result of which it is necessary, in the opinion of counsel for the Underwriters or for the Company, to (i) amend the Registration Statement in order that the Registration Statement will not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; (ii) amend or supplement the Pricing Disclosure Package or the Prospectus in order that the Pricing Disclosure Package or the Prospectus, as the case may be, will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein not misleading in the light of the circumstances existing at the time it is delivered to a purchaser or (iii) amend the Registration Statement or amend or supplement the Pricing Disclosure Package or the Prospectus, as the case may be, in order to comply with the requirements of the Securities Act or the Securities Act Regulations, the Company will promptly (A) give the Representative notice of such event; (B) prepare any amendment or supplement as may be necessary to correct such statement or omission or to make the Registration Statement, the Pricing Disclosure Package or the Prospectus comply with such requirements and, a reasonable amount of time prior to any proposed filing or use, furnish the Representative with copies of any such amendment or supplement and (C) file with the Commission any such amendment or supplement; provided that the Company shall not file or use any such amendment or supplement to which the Representative or counsel for the Underwriters shall reasonably object. The Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request. The Company has given the Representative notice of any filings made pursuant to the Exchange Act or the Exchange Act Regulations within 48 hours prior to the Applicable Time; the Company will give the Representative notice of its intention to make any such filing from the Applicable Time to the Closing Date and will furnish the Representative with copies of any such documents a reasonable amount of time prior to such proposed filing, as the case may be, and will not file or use any such document to which the Representative or counsel for the Underwriters shall reasonably object.

3.2.3 Free Writing Prospectuses. The Company will not, without the prior consent of the Representative, (i) make any offer relating to the Public Securities that would constitute a "free writing prospectus" as defined in Rule 405 under the Securities Act, except for any Issuer Free Writing Prospectus set forth in Schedule 2-B hereto and any electronic road show previously approved by the Representative, or (ii) file, refer to, approve, use or authorize the use of any "free writing prospectus" as defined in Rule 405 under the Securities Act with respect to the Offering or the Public Securities. If at any time any event shall have occurred as a result of which any Issuer Free Writing Prospectus as then amended or supplemented would, in the judgment of the Underwriters or the Company, conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus as then amended or supplemented or would, in the judgment of the Underwriters or the Company, include an untrue statement of a material fact or omit to state any material necessary in order to make the statements therein, in the light of the circumstances existing at the time of delivery to the purchaser, not misleading, or if to comply with the Securities Act or the Securities Act Regulations it shall be necessary at any time to amend or supplement any Issuer Free Writing Prospectus, the Company will notify the Representative promptly and, if requested by the Representative, prepare and furnish without charge to each Underwriter an appropriate amendment or supplement (in form and substance satisfactory to the Representative) that will correct such statement, omission or conflict or effect such compliance. The Company has complied and will comply with the requirements of Rule 433 with respect to each Issuer Free Writing Prospectus including, without limitation, all prospectus delivery, filing, record retention and legending requirements applicable to each such Issuer Free Writing Prospectus.

3.2.4 Testing-the-Waters Communications. If at any time following the distribution of any Written Testing-the-Waters Communication there occurred or occurs an event or development as a result of which such Written Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company shall promptly notify the Representative and shall promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission. The Company will promptly notify the Representative of (i) any distribution by the Company of Written Testing-the-Waters Communications and (ii) any request by the Commission for information concerning the Written Testing-the-Waters Communications

3.3 Delivery to the Underwriters of Registration Statements. The Company has delivered or made available or shall deliver or make available to the Representative and counsel for the Representative, without charge, signed copies of the Registration Statement as originally filed and each amendment thereto (including exhibits filed therewith) and signed copies of all consents and certificates of experts, and will also deliver to the Underwriters, without charge, a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) for each of the Underwriters. The copies of the Registration Statement and each amendment thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

3.4 Delivery to the Underwriters of Prospectuses. The Company has delivered or made available or will deliver or make available to each Underwriter, without charge, as many copies of each Preliminary Prospectus as such Underwriter reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the Securities Act. The Company will furnish to each Underwriter, without charge, during the period when a

prospectus relating to the Public Securities is (or, but for the exception afforded by Rule 172 of the Securities Act Regulations, would be) required to be delivered under the Securities Act, such number of copies of the Prospectus (as amended or supplemented) as such Underwriter may reasonably request. The Prospectus and any amendments or supplements thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

3.5 Effectiveness and Events Requiring Notice to the Representative. The Company shall notify the Representative immediately and confirm the notice in writing: (i) of the effectiveness of the Registration Statement and any amendment thereto; (ii) of the issuance by the Commission of any stop order or of the initiation, or the threatening, of any proceeding for that purpose; (iii) of the issuance by any state securities commission of any proceedings for the suspension of the qualification of the Public Securities for offering or sale in any jurisdiction or of the initiation, or the threatening, of any proceeding for that purpose; (iv) of the mailing

and delivery to the Commission for filing of any amendment or supplement to the Registration Statement or Prospectus; (v) of the receipt of any comments or request for any additional information from the Commission; and (vi) of the happening of any event during the period described in this Section 3.5 that, in the judgment of the Company, makes any statement of a material fact made in the Registration Statement, the Pricing Disclosure Package or the Prospectus untrue or that requires the making of any changes in (a) the Registration Statement in order to make the statements therein not misleading, or (b) in the Pricing Disclosure Package or the Prospectus in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. If the Commission or any state securities commission shall enter a stop order or suspend such qualification at any time, the Company shall make every reasonable effort to obtain promptly the lifting of such order.

3.6 Financial Public Relations Firm. As of the Effective Date, the Company shall have retained a financial public relations firm reasonably acceptable to the Representative and the Company, which shall initially be [·], which firm shall be experienced in assisting issuers in initial public offerings of securities and in their relations with their security holders, and shall retain such firm or another firm reasonably acceptable to the Representative for a period of not less than two (2) years after the Effective Date; provided that such provision shall not prevent a sale, merger or similar transaction involving the Company.

3.7 Reports to the Representative.

3.7.1 Periodic Reports, etc. For a period of three (3) years after the Effective Date, at the Representative's request, the Company shall furnish to the Representative copies of such financial statements and other periodic and special reports as the Company from time to time furnishes generally to holders of any class of its securities and also promptly furnish to the Representative: (i) a copy of each periodic report the Company shall be required to file with the Commission under the Exchange Act and the Exchange Act Regulations; (ii) a copy of every press release and every news item and article with respect to the Company or its affairs which was released by the Company; (iii) a copy of each Form 8-K prepared and filed by the Company; (iv) five copies of each registration statement filed by the Company under the Securities Act; (v) a copy of each report or other communication furnished to stockholders and (vi) such additional documents and information with respect to the Company and the affairs of any future subsidiaries of the Company as the Representative may from time to time reasonably request; provided the Representative shall sign, if requested by the Company, a Regulation FD compliant confidentiality agreement which is reasonably acceptable to the Representative and Representative's Counsel in connection with the Representative's receipt of such information. Documents filed with the Commission pursuant to its EDGAR system or otherwise publicly filed or made available shall be deemed to have been delivered to the Representative pursuant to this Section 3.7.1.

3.7.2 Transfer Agent; Transfer Sheets. As of the Effective Date, the Company shall have retained a transfer agent and registrar acceptable to the Representative (the "**Transfer Agent**"). Computershare Trust Company, N.A. is acceptable to the Representative to act as Transfer Agent for the shares of Common Stock.

3.8 Payment of Expenses

3.8.1 General Expenses Related to the Offering. The Company hereby agrees to pay on each of the Closing Date and the Option Closing Date, if any, to the extent not paid at the Closing Date, all expenses incident to the performance of the obligations of the Company under this Agreement, including, but not limited to: (a) all filing fees and communication expenses relating to the registration of Public Securities to be issued and sold in the Offering with the Commission; (b) all filing fees associated with the review of the Offering by FINRA; (c) all fees and expenses relating to the listing of such Common Stock on the NasdaqCM; (d) all fees, expenses and disbursements relating to background checks of the Company's officers and directors in an amount not to exceed $2,500 per individual and $12,500 in the aggregate; (e) all fees, expenses and disbursements relating to the registration or qualification of the Public Securities under the "blue sky" securities laws of such states and other jurisdictions as the Representative may reasonably designate (including, without limitation, all filing and registration fees, and the reasonable fees and disbursements of "blue sky" counsel, it being agreed that such fees and expenses will be limited to: (i) if the offering is commenced on either the NASDAQ Global Market, NASDAQ Global Select Market, NASDAQ Capital Market or the NYSE Amex, the company will make a payment of $5,000 to such counsel at closing or (ii) if the offering is commenced on the Over the Counter Bulletin

Board, the Company will make a payment of $15,000 to such counsel upon the commencement of "blue sky" work by such counsel and an additional $5,000 at closing); (f) all fees, expenses and disbursements relating to the registration, qualification or exemption of the Public Securities under the securities laws of such foreign jurisdictions as the Representative may reasonably designate; (g) the costs of all mailing and printing of the underwriting documents (including, without limitation, this Agreement, any blue sky surveys and, if appropriate, any agreement among underwriters, selected dealers' agreement, underwriters' questionnaire and power of attorney), Registration Statements, Prospectuses and all amendments, supplements and exhibits thereto and as many preliminary and final Prospectuses as the Representative may reasonably deem necessary; (h) the costs and expenses of the public relations firm referred to in Section 3.6 hereof; (i) the costs of preparing, printing and delivering certificates representing the Public Securities; (j) fees and expenses of the Transfer Agent for the shares of Common Stock; (k) stock transfer and/or stamp taxes, if any, payable upon the transfer of securities from the Company to the Underwriters; (l) to the extent approved by the Company in writing, the costs associated with post-Closing advertising of the Offering in the national editions of *The Wall Street Journal* and *The New York Times*; (m) the costs associated with bound volumes of the public offering materials as well as commemorative mementos and lucite tombstones not to exceed $3,000, each of which the Company or its designee will provide, including to the Representative, within a reasonable time after the Closing in such quantities as the Representative may reasonably request; (n) the fees and expenses of the Company's accountants; (o) the fees and expenses of the Company's legal counsel and other agents and representatives; (p) the reasonable and documented fees and expenses of Underwriter's legal counsel not to exceed $50,000; (q) the $25,000 cost associated with the Underwriters' use of Ipreo's book building, prospectus tracking and compliance software for the Offering; and (r) upon successful completion of the Offering, up to $20,000 of the Underwriters' actual accountable "road show" expenses for the offering. The Representative may deduct from the net proceeds of the Offering payable to the Company on the Closing Date, or the Option Closing Date, if any, the expenses set forth herein to be paid by the Company

to the Underwriters, provided, however, that in the event that the Offering is terminated, the Company agrees to reimburse the Underwriters pursuant to Section 8.3 hereof.

3.8.2 Non-accountable Expenses. The Company further agrees that, in addition to the expenses payable pursuant to Section 3.8.1, on the Closing Date it shall pay to the Representative, by deduction from the net proceeds of the Offering contemplated herein, a non-accountable expense allowance equal to one percent (1%) of the gross proceeds received by the Company from the sale of the Firm Shares.

3.9 Application of Net Proceeds. The Company shall apply the net proceeds from the Offering received by it in a manner consistent with the application thereof described under the caption "Use of Proceeds" in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

3.10 Delivery of Earnings Statements to Security Holders. The Company shall make generally available to its security holders as soon as practicable, but not later than the first day of the fifteenth (15th) full calendar month following the Effective Date, an earnings statement (which need not be certified by an independent registered public accounting firm unless required by the Securities Act or the Securities Act Regulations, but which shall satisfy the provisions of Rule 158(a) under Section 11(a) of the Securities Act) covering a period of at least twelve (12) consecutive months beginning after the Effective Date.

3.11 Stabilization. Neither the Company nor, to its knowledge, any of its employees, directors or stockholders (without the consent of the Representative) has taken or shall take, directly or indirectly, any action designed to or that has constituted or that might reasonably be expected to cause or result in, under Regulation M of the Exchange Act, or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Public Securities.

3.12 Internal Controls. The Company shall maintain a system of internal accounting controls sufficient to provide reasonable assurances that: (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary in order to permit preparation of financial statements in accordance with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

3.13 Accountants. As of the Effective Date, the Company shall have retained an independent

registered public accounting firm, as required by the Securities Act and the Regulations and the PCAOB, reasonably acceptable to the Representative. The Representative acknowledges that the Auditor is acceptable to the Representative.

3.14 FINRA. For a period of 90 days from the later of the Closing Date or the Option Closing Date, the Company shall advise the Representative (who shall make an appropriate filing with FINRA) if it is or becomes aware that (i) any officer or director of the Company, (ii) any beneficial owner of 5% or more of any class of the Company's securities or (iii) any beneficial owner of the Company's unregistered equity securities which were acquired during the 180 days immediately preceding the filing of the Registration Statement is or becomes an affiliate or associated person of a FINRA member participating in the Offering (as determined in accordance with the rules and regulations of FINRA).

3.15 No Fiduciary Duties. The Company acknowledges and agrees that the Underwriters' responsibility to the Company is solely contractual in nature and that none of the Underwriters or their affiliates or any selling agent shall be deemed to be acting in a fiduciary capacity, or otherwise owes any fiduciary duty to the Company or any of its affiliates in connection with the Offering and the other transactions contemplated by this Agreement.

3.16 Company Lock-Up Agreements. The Company, on behalf of itself and any successor entity of the Company, agrees that, without the prior written consent of the Representative, it will not, during the period commencing on the date of this Agreement and ending on the six (6) month anniversary thereof (the "**Lock-Up Period**"), (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company (other than the Additional Shares and Common Stock issued pursuant to employee benefit plans, qualified stock option plans or other employee compensation plans existing on the date hereof or pursuant to currently outstanding options, warrants or rights) provided that either (a) such shares shall not vest during the Lock-Up Period or (b) the grantee of such shares will execute a Lock-Up Agreement; (ii) file or cause to be filed any registration statement with the Commission relating to the offering of any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company other than a registration statement on Form S-4 or S-8; or (iii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of capital stock of the Company, whether any such transaction described in clause (i), (ii) or (iii) above is to be settled by delivery of shares of capital stock of the Company or such other securities, in cash or otherwise.

The restrictions contained in this Section 3.16 shall not apply to (i) the Public Securities to be sold hereunder, (ii) the issuance by the Company of shares of Common Stock upon the exercise of a stock option or warrant or the conversion of a security outstanding on the date hereof, which is disclosed in the Registration Statement, Pricing Disclosure Package and Prospectus, (iii) the issuance by the Company of any security under any equity compensation plan of the Company, (iv) the issuance by the Company of shares of Common Stock in the connection with mergers, acquisitions or joint ventures, and (v) the issuance by the Company of shares of Common Stock to consultants in the Company's ordinary course of business and not for capital raising transactions.

3.17 Release of D&O Lock-up Period. If the Representative, in its sole discretion, agrees to release or waive the restrictions set forth in the Lock-Up Agreements described in Section 2.25 hereof for an officer or director of the Company and provide the Company with notice of the impending release or waiver at least three (3) Business Days before the effective date of the release or waiver, the Company agrees if required by applicable law to announce the impending release or waiver by a press release substantially in the form of Exhibit C hereto through a major news service at least two (2) Business Days before the effective date of the release or waiver.

3.18 Blue Sky Qualifications. The Company shall use its best efforts, in cooperation with the Underwriters, if necessary, to qualify the Public Securities for offering and sale under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Representative may designate and to maintain such qualifications in effect so long as required to complete the distribution of the Public Securities; provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to

subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject.

3.19 Reporting Requirements. The Company, during the period when a prospectus relating to the Public Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the Securities Act, will file all documents required to be filed with the Commission pursuant to the Exchange Act within the time periods required by the Exchange Act and Exchange Act Regulations. Additionally, the Company shall report the use of proceeds from the issuance of the Public Securities as may be required under Rule 463 under the Securities Act Regulations.

3.20 Emerging Growth Company Status. The Company shall promptly notify the Representative if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of the Public Securities within the meaning of the Securities Act and (ii) fifteen (15) days following the completion of the Lock-Up Period.

3.21 Press Releases. Prior to the Closing Date and any Option Closing Date, the Company shall not issue any press release or other communication directly or indirectly or hold any press conference with respect to the Company, its condition, financial or otherwise, or earnings, business affairs or business prospects (except for routine oral marketing communications in the ordinary course of business and consistent with the past practices of the Company and of which the Representative is notified), without the prior written consent of the Representative, which consent shall not be unreasonably withheld, unless in the judgment of the Company and its counsel, and after notification to the Representative, such press release or communication is required by law.

3.22 Sarbanes-Oxley. The Company shall at all times comply with all applicable provisions of the Sarbanes-Oxley Act in effect from time to time, provided that such provision shall not prevent a sale, merger or similar transaction involving the Company.

3.23 IRS Forms. If requested by the Representative, the Company shall deliver to each Underwriter (or its agent), prior to or at the Closing Date, a properly completed and executed Internal Revenue Service ("**IRS**") Form W-9 or an IRS Form W-8, as appropriate, together with all required attachments to such form.

4. Conditions of Underwriters' Obligations. The obligations of the Underwriters to purchase and pay for the Public Securities, as provided herein, shall be subject to (i) the continuing accuracy of the representations and warranties of the Company as of the date hereof and as of each of the Closing Date and the Option Closing Date, if any; (ii) the accuracy of the statements of officers of the Company made pursuant to the provisions hereof; (iii) the performance by the Company of its obligations hereunder; and (iv) the following conditions:

4.1 Regulatory Matters.

4.1.1 Effectiveness of Registration Statement; Rule 430A Information. The Registration Statement shall have become effective not later than 5:30 p.m., Eastern time, on the date of this Agreement or such later date and time as shall be consented to in writing by you, and, at each of the Closing Date and any Option Closing Date, no stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto shall have been issued under the Securities Act, no order preventing or suspending the use of any Preliminary Prospectus or the Prospectus shall have been issued and no proceedings for any of those purposes shall have been instituted or are pending or, to the Company's knowledge, contemplated by the Commission. The Company has complied with each request (if any) from the Commission for additional information. A prospectus containing the Rule 430A Information shall have been filed with the Commission in the manner and within the time frame required by Rule 424(b) under the Securities Act Regulations (without reliance on Rule 424(b)(8)) or a post-effective amendment providing such information shall have been filed with, and declared effective by, the Commission in accordance with the requirements of Rule 430A under the Securities Act Regulations.

4.1.2 FINRA Clearance. On or before the Effective Date, the Representative shall have received clearance from FINRA as to the amount of compensation allowable or payable to the Underwriters as described in the Registration Statement.

4.1.3 NasdaqCM Stock Market Clearance. On the Closing Date, the Company's Common Stock (including the shares of Common Stock underlying the Additional Shares) shall have been approved for

listing on the NasdaqCM. On the first Option Closing Date (if any), the Company's Common Stock (including the Common Stock underlying the Additional Shares) shall have been approved for listing on the NasdaqCM, subject only to official notice of issuance.

4.2 Company Counsel Matters.

4.2.1 Closing Date Opinion of Counsel to the Company. On the Closing Date, the Representative shall have received the favorable opinion of Reed Smith LLP, and a written statement providing certain "10b-5" negative assurances, dated the Closing Date and addressed to the Representative, substantially in a form acceptable to the Representative.

4.2.2 Closing Date Opinion of Regulatory Counsel to the Company. On the Closing Date, the Representative shall have received the favorable opinion of Thompson Coburn LLP, regulatory counsel to the Company, and a written statement providing certain "10b-5" negative assurances, dated the Closing Date and addressed to the Representative, substantially in a form acceptable to the Representative.

4.2.3 Closing Date Opinion of Intellectual Property Counsel to the Company. On the Closing Date, the Representative shall have received the favorable opinion of King & Spalding LLP, intellectual property counsel to the Company, and a written statement providing certain "10b-5" negative assurances, dated the Closing Date and addressed to the Representative, substantially in a form acceptable to the Representative.

4.2.4 Option Closing Date Opinions of Counsel. On the Option Closing Date, if any, the Representative shall have received the favorable opinions of each counsel listed in Sections 4.2.1, 4.2.2 and 4.2.3, dated the Option Closing Date, addressed to the Representative and in form and substance reasonably satisfactory to the Representative, confirming as of the Option Closing Date, the statements made by such counsels in their respective opinions delivered on the Closing Date.

4.2.5 Reliance. In rendering such opinions, such counsel may rely: (i) as to matters involving the application of laws other than the laws of the United States and jurisdictions in which they are admitted, to the extent such counsel deems proper and to the extent specified in such opinion, if at all, upon an opinion or opinions (in form and substance reasonably satisfactory to the Representative) of other counsel reasonably acceptable to the Representative, familiar

with the applicable laws; and (ii) as to matters of fact, to the extent they deem proper, on certificates or other written statements of officers of the Company and officers of departments of various jurisdictions having custody of documents respecting the corporate existence or good standing of the Company, provided that copies of any such statements or certificates shall be delivered to Representative's Counsel if requested.

4.3 Comfort Letters.

4.3.1 Cold Comfort Letter. At the time this Agreement is executed you shall have received a cold comfort letter containing statements and information of the type customarily included in accountants' comfort letters with respect to the financial statements and certain financial information contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus, addressed to the Representative and in form and substance satisfactory in all respects to you and to Representative's Counsel from the Auditor, dated as of the date of this Agreement.

4.3.2 Bring-down Comfort Letter. At each of the Closing Date and the Option Closing Date, if any, the Representative shall have received from the Auditor a letter, dated as of the Closing Date or the Option Closing Date, as applicable, to the effect that the Auditor reaffirms the statements made in the letter furnished pursuant to Section 4.3.1, except that the specified date referred to shall be a date not more than three (3) Business Days prior to the Closing Date or the Option Closing Date, as applicable.

4.4 Officers' Certificates.

4.4.1 Officers' Certificate. The Company shall have furnished to the Representative a certificate, dated the Closing Date and any Option Closing Date (if such date is other than the Closing Date), of its Chief Executive Officer and its Chief Financial Officer stating that (i) such officers have carefully examined the Registration Statement, the Pricing Disclosure Package, any Issuer Free Writing Prospectus and the Prospectus

and, in their opinion, the Registration Statement and each amendment thereto, as of the Applicable Time and as of the date of this Agreement and as of the Closing Date (or any Option Closing Date if such date is other than the Closing Date) did not include any untrue statement of a material fact and did not omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and the Pricing Disclosure Package, as of the Applicable Time and as of the Closing Date (or any Option Closing Date if such date is other than the Closing Date), any Issuer Free Writing Prospectus as of its date and as of the Closing Date (or any Option Closing Date if such date is other than the Closing Date), the Prospectus and each amendment or supplement thereto, as of the respective date thereof and as of the Closing Date, did not include any untrue statement of a material fact and did not omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances in which they were made, not misleading, (ii) since the effective date of the Registration Statement, no event has occurred which should have been set forth in a supplement or amendment to the Registration Statement, the Pricing Disclosure Package or the Prospectus, (iii) to the best of their knowledge, as of the Closing Date (or any Option Closing Date if such date is other than the Closing Date), the representations and warranties of the Company in this Agreement are true and correct in all material respects (except for those representations and warranties qualified as to materiality, which shall be true and correct in all respects and except for those representations and warranties which refer to facts existing at a specific date, which shall be true and correct as of such date) and the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date (or any Option Closing Date if such date is other than the Closing Date), and (iv) there has not been, subsequent to the date of the most recent audited financial statements included or incorporated by reference in the Pricing Disclosure Package, any material adverse change in the financial position or results of operations of the Company, or any change or development that, singularly or in the aggregate, would involve a material adverse change, in or affecting the condition (financial or otherwise), results of operations, business, assets or prospects of the Company, except as set forth in the Prospectus.

4.4.2 Secretary's Certificate. At each of the Closing Date and the Option Closing Date, if any, the Representative shall have received a certificate of the Company signed by the Secretary of the Company, dated the Closing Date or the Option Date, as the case may be, respectively, certifying: (i) that each of the Charter and by-laws is true and complete, has not been modified and is in full force and effect; (ii) that the resolutions of the Company's Board of Directors relating to the Offering are in full force and effect and have not been modified; (iii) as to the accuracy and completeness of all correspondence between the Company or its counsel and the Commission; and (iv) as to the incumbency of the officers of the Company. The documents referred to in such certificate shall be attached to such certificate.

4.5 No Material Changes. Prior to and on each of the Closing Date and each Option Closing Date, if any: (i) there shall have been no Material Adverse Change and no material change in the capital stock or debt of the Company from the latest dates as of which such information is set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (ii) no action, suit or proceeding, at law or in equity, shall have been pending or threatened against the Company or any Insider before or by any court or federal or state commission, board or other administrative agency wherein an unfavorable decision, ruling or finding may result in a Material Adverse Change, except as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (iii) no stop order shall have been issued under the Securities Act and no proceedings therefore shall have been initiated or threatened by the Commission; (iv) no action shall have been taken and no law, statute, rule, regulation or order shall have been enacted, adopted or issued by any Governmental Entity which would prevent the issuance or sale of the Public Securities or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company; (v) no injunction, restraining order or order of any other nature by any federal or state court of competent jurisdiction shall have been issued which would prevent the issuance or sale of the Public Securities or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company, and (vi) the Registration Statement, the Pricing Disclosure Package and the Prospectus and any amendments or supplements thereto shall contain all material statements which are required to be stated therein in accordance with the Securities Act and the Securities Act Regulations and shall conform in all material respects to the requirements of the Securities Act and the Securities Act Regulations, and neither the Registration Statement, the Pricing Disclosure Package, the Prospectus nor any Issuer Free Writing Prospectus nor any amendment or supplement thereto shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

4.6 No Material Misstatement or Omission. The Underwriters shall not have discovered and disclosed to the Company on or prior to the Closing Date and any Option Closing Date that the Registration Statement or any amendment or supplement thereto contains an untrue statement of a fact which, in the opinion of counsel for the Underwriters, is material or omits to state any fact which, in the opinion of such counsel, is material and is required to be stated therein or is necessary to make the statements therein not misleading, or that the Registration Statement, Pricing Disclosure Package, any Issuer Free Writing Prospectus or the Prospectus or any amendment or supplement thereto contains an untrue statement of fact which, in the opinion of such counsel, is material or omits to state

any fact which, in the opinion of such counsel, is material and is necessary in order to make the statements, in the light of the circumstances under which they were made, not misleading.

4.7 Corporate Proceedings. All corporate proceedings and other legal matters incident to the authorization, form and validity of each of this Agreement, the Representative's Warrant Agreement, the Public Securities, the Registration Statement, the Pricing Disclosure Package, each Issuer Free Writing Prospectus, if any, and the Prospectus and all other legal matters relating to this Agreement, the Representative's Warrant Agreement and the transactions contemplated hereby and thereby shall be reasonably satisfactory in all material respects to counsel for the Underwriters, and the Company shall have furnished to such counsel all documents and information that they may reasonably request to enable them to pass upon such matters.

4.8 Delivery of Agreements.

4.8.1 Effective Date Deliveries. On or before the Effective Date, the Company shall have delivered to the Representative executed copies of the Lock-Up Agreements from each of the persons listed in Schedule 3 hereto.

4.8.2 Closing Date Deliveries. On the Closing Date, the Company shall have delivered to the Representative an executed copy of the Representative's Warrant Agreement.

4.9 Additional Documents. At the Closing Date and at each Option Closing Date (if any), Representative's Counsel shall have been furnished with such documents and opinions as they may require for the purpose of enabling Representative's Counsel to deliver an opinion to the Underwriters, or in order to evidence the accuracy of any of the representations or warranties, or the fulfillment of any of the conditions, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Public Securities and the Representative's Securities as herein contemplated shall be satisfactory in form and substance to the Representative and Representative's Counsel.

5. Indemnification.

5.1 Indemnification by the Company. The Company shall indemnify and hold harmless each Underwriter, its affiliates and each of its and their respective directors, officers, members, employees, representatives and agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the Securities Act of or Section 20 of the Exchange Act (collectively the "**Underwriter Indemnified Parties**," and each a "**Underwriter Indemnified Party**") against any loss, claim, damage, expense or liability whatsoever (or any action, investigation or proceeding in respect thereof), to which such Underwriter Indemnified Party may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, expense, liability, action, investigation or proceeding arises out of or is based upon (A) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "**issuer information**" filed or required to be filed pursuant to Rule 433(d) of the Securities Act Regulations, any Registration Statement or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein, or (B) the omission or alleged omission to state in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) of the Securities Act Regulations, any Registration Statement or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein, a material fact required to be stated therein or necessary to make the statements therein in the light of the circumstances under which they were made not misleading, and shall reimburse the Underwriter Indemnified Party promptly upon demand for any legal fees or other expenses reasonably incurred by that Underwriter Indemnified Party in connection with investigating, or preparing to defend, or defending against, or appearing as a third party witness in respect of, or otherwise incurred in connection with, any such loss, claim, damage, expense, liability, action, investigation or proceeding, as such

fees and expenses are incurred; provided, however, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, expense or liability arises out of or is based upon an untrue statement in, or omission from any Preliminary Prospectus, any Registration Statement or the Prospectus, or any such amendment or supplement thereto, or any Issuer Free Writing Prospectus made in reliance upon and in conformity with written information furnished to the Company through the Representative by or on behalf of any Underwriter specifically for use therein, which information the parties hereto agree is limited to the Underwriters' Information. This indemnity agreement is not exclusive and will be in addition to any liability, which the Company might otherwise have and shall not limit any rights or remedies which may otherwise be available at law or in equity to each Underwriter Indemnified Party.

5.2 Indemnification by the Underwriter. Each Underwriter, severally and not jointly, shall indemnify and hold harmless the Company, the Company's directors, its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (collectively the "**Company Indemnified Parties**" and each a "**Company Indemnified Party**") against any loss, claim, damage, expense or liability whatsoever (or any action, investigation or proceeding in respect thereof), to which such Company Indemnified Party may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, expense, liability, action, investigation or proceeding arises out of or is based upon (i) any untrue statement of a material fact contained in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "**issuer information**" filed or required to be filed pursuant to Rule 433(d) of the Securities Act Regulations, any Registration Statement or the Prospectus, or in any amendment or supplement thereto, or (ii) the omission to state in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "**issuer information**" filed or required to be filed pursuant to Rule 433(d) of the Securities Act Regulations, any Registration Statement or the Prospectus, or in any amendment or supplement thereto, a material fact required to be stated therein or necessary to make the statements therein in the light of the circumstances under which they were made not misleading, but in each case only to the extent that the untrue statement or omission was made in reliance upon and in conformity with written information furnished to the Company through the Representative by or on behalf of any Underwriter specifically for use therein, which information the parties hereto agree is limited to the Underwriters' Information and shall reimburse the Company for any legal or other expenses reasonably incurred by such party in connection with investigating or preparing to defend or defending against or appearing as third party witness in connection with any such loss, claim, damage, liability, action, investigation or proceeding, as such fees and expenses are incurred. Notwithstanding the provisions of this Section 5.2, in no event shall any indemnity by an Underwriter under this Section 5.2 exceed the total discount and commission received by such Underwriter in connection with the Offering.

5.3 Procedure. Promptly after receipt by an indemnified party under this Section 5 of notice of the commencement of any action, the indemnified party shall, if a claim in respect thereof is to be made against an indemnifying party under this Section 5, notify such indemnifying party in writing of the commencement of that action; *provided*, *however*, that the failure to notify the indemnifying party shall not relieve it from any liability which it may have under this Section 5 except to the extent it has been materially adversely prejudiced by such failure; and, *provided*, *further*, that the failure to notify an indemnifying party shall not relieve it from any liability which it may have to an indemnified party otherwise than under this Section 5. If any such action shall be brought against an indemnified party, and it shall notify the indemnifying party thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it wishes, jointly with any other similarly notified indemnifying party, to assume the defense of such action with counsel reasonably satisfactory to the indemnified party (which counsel shall not, except with the written consent of the indemnified party, be counsel to the indemnifying party). After notice from the indemnifying party to the indemnified party of its election to assume the defense of such action, except as provided herein, the indemnifying party shall not be liable to the indemnified party under Section 5 for any legal or other expenses subsequently incurred by the indemnified party in connection with the defense of such action

other than reasonable costs of investigation; provided, however, that any indemnified party shall have the right to employ separate counsel in any such action and to participate in the defense of such action but the fees and expenses of such counsel (other than reasonable costs of investigation) shall be at the expense of such indemnified party unless (i) the employment thereof has been specifically authorized in writing by the Company in the case of a claim for indemnification under 5.1 or the Representative in the case of a claim for indemnification under Section 5.2, (ii) such indemnified party shall have been advised by its counsel that there may be one or more legal defenses available to it which are different from or additional to those available to the indemnifying party, or (iii) the indemnifying party has failed to assume the defense of such

action and employ counsel reasonably satisfactory to the indemnified party within a reasonable period of time after notice of the commencement of the action or the indemnifying party does not diligently defend the action after assumption of the defense, in which case, if such indemnified party notifies the indemnifying party in writing that it elects to employ separate counsel at the expense of the indemnifying party, the indemnifying party shall not have the right to assume the defense of (or, in the case of a failure to diligently defend the action after assumption of the defense, to continue to defend) such action on behalf of such indemnified party and the indemnifying party shall be responsible for legal or other expenses subsequently incurred by such indemnified party in connection with the defense of such action; *provided, however*, that the indemnifying party shall not, in connection with any one such action or separate but substantially similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances, be liable for the reasonable fees and expenses of more than one separate firm of attorneys at any time any such indemnified party (in addition to any local counsel), which firm shall be designated in writing by the Representative if the indemnified party under this Section 5 is an Underwriter Indemnified Party or by the Company if an indemnified party under this Section 5 is a Company Indemnified Party. Subject to this Section 5.3, the amount payable by an indemnifying party under Section 5 shall include, but not be limited to, (x) reasonable legal fees and expenses of counsel to the indemnified party and any other expenses in investigating, or preparing to defend or defending against, or appearing as a third party witness in respect of, or otherwise incurred in connection with, any action, investigation, proceeding or claim, and (y) all amounts paid in settlement of any of the foregoing. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of judgment with respect to any pending or threatened action or any claim whatsoever, in respect of which indemnification or contribution could be sought under this Section 5 (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party in form and substance reasonably satisfactory to such indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party. Subject to the provisions of the following sentence, no indemnifying party shall be liable for settlement of any pending or threatened action or any claim whatsoever that is effected without its written consent (which consent shall not be unreasonably withheld or delayed), but if settled with its written consent, if its consent has been unreasonably withheld or delayed or if there be a judgment for the plaintiff in any such matter, the indemnifying party agrees to indemnify and hold harmless any indemnified party from and against any loss or liability by reason of such settlement or judgment. In addition, if at any time an indemnified party shall have requested that an indemnifying party reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated herein effected without its written consent if (i) such settlement is entered into more than forty-five (45) days after receipt by such indemnifying party of the request for reimbursement, (ii) such indemnifying party shall have received notice of the terms of such settlement at least thirty (30) days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

5.4 Contribution. If the indemnification provided for in this Section 5 is unavailable or insufficient to hold harmless an indemnified party under Section 5.1 or Section 5.2, then each indemnifying party shall, in lieu of indemnifying such indemnified party, contribute to the amount paid, payable or otherwise incurred by such indemnified party as a result of such loss, claim, damage, expense or liability (or any action, investigation or proceeding in respect thereof), as incurred, (i) in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and each of the Underwriters on the other hand from the Offering, or (ii) if the allocation provided by clause (i) of this Section 5.4 is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) of this Section 5.4 but also the relative fault of the Company on the one hand and the Underwriters on the other with respect to the statements, omissions, acts or failures to act which resulted in such loss, claim, damage, expense or liability (or any action, investigation or proceeding in respect thereof) as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other with respect to such offering shall be deemed to be in the same proportion as the total proceeds from the Offering (before deducting expenses) received by the Company bear to the total underwriting discount and commissions received by the Underwriters in connection with the Offering, in each case as set forth in the table on the cover page of the Prospectus. The relative fault of the Company on the one hand and the Underwriters on the other shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the

one hand or the Underwriters on the other, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such untrue statement, omission, act or failure to act; provided that the parties hereto agree that the written information furnished to the Company through the Representative by or on behalf of any Underwriter for use in any Preliminary Prospectus, any Registration Statement or the Prospectus, or in any amendment or supplement thereto, consists solely of the Underwriters' Information. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this Section 5.4 be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, damage, expense, liability, action, investigation or proceeding referred to above in this Section 5.4 shall be deemed to include, for purposes of this Section 5.4, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating, preparing to defend or defending against or appearing as a third party witness in respect of, or otherwise incurred in connection with, any such loss, claim, damage, expense, liability, action, investigation or proceeding. Notwithstanding the provisions of this Section 5.4, no Underwriter shall be required to contribute any amount in excess of the total discount and commission received by such Underwriter in connection with the Offering less the amount of any damages which such Underwriter has otherwise paid or become liable to pay by reason of any untrue or alleged untrue statement, omission or alleged omission, act or alleged act or failure to act or alleged failure to act. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligation to contribute as provided in this Section 5.4 are several and in proportion to their respective underwriting obligation, and not joint.

6. Default by an Underwriter.

6.1 Default Not Exceeding 10% of Firm Shares or Additional Shares. If any Underwriter or Underwriters shall default in its or their obligations to purchase the Firm Shares or the Additional Shares, if the Over-allotment Option is exercised hereunder, and if the number of the Firm Shares or Additional Shares with respect to which such default relates does not exceed in the aggregate 10% of the number of Firm Shares or Additional Shares that all Underwriters have

agreed to purchase hereunder, then such Firm Shares or Additional Shares to which the default relates shall be purchased by the non-defaulting Underwriters in proportion to their respective commitments hereunder.

6.2 Default Exceeding 10% of Firm Shares or Additional Shares. In the event that the default addressed in Section 6.1 relates to more than 10% of the Firm Shares or Additional Shares, you may in your discretion arrange for yourself or for another party or parties to purchase such Firm Shares or Additional Shares to which such default relates on the terms contained herein. If, within one (1) Business Day after such default relating to more than 10% of the Firm Shares or Additional Shares, you do not arrange for the purchase of such Firm Shares or Additional Shares, then the Company shall be entitled to a further period of one (1) Business Day within which to procure another party or parties satisfactory to you to purchase said Firm Shares or Additional Shares on such terms. In the event that neither you nor the Company arrange for the purchase of the Firm Shares or Additional Shares to which a default relates as provided in this Section 6, this Agreement will automatically be terminated by you or the Company without liability on the part of the Company (except as provided in Sections 3.10 and 5 hereof) or the several Underwriters (except as provided in Section 5 hereof); provided, however, that if such default occurs with respect to the Additional Shares, this Agreement will not terminate as to the Firm Shares; and provided, further, that nothing herein shall relieve a defaulting Underwriter of its liability, if any, to the other Underwriters and to the Company for damages occasioned by its default hereunder.

6.3 Postponement of Closing Date. In the event that the Firm Shares or Additional Shares to which the default relates are to be purchased by the non-defaulting Underwriters, or are to be purchased by another party or parties as aforesaid, you or the Company shall have the right to postpone the Closing Date or Option Closing Date for a reasonable period, but not in any event exceeding five (5) Business Days, in order to effect whatever changes may thereby be made necessary in the Registration Statement, the Pricing Disclosure Package or the Prospectus or in any other documents and arrangements, and the Company agrees to file promptly any amendment to the Registration Statement, the Pricing Disclosure Package or the Prospectus that in the opinion of counsel for the Underwriter may thereby be made necessary. The term "**Underwriter**" as used in this Agreement shall include any party substituted under this Section 6 with like effect as if it had originally been a party to this Agreement with respect to such shares of Common Stock.

7. Additional Covenants.

7.1 Board Composition and Board Designations. The Company shall ensure that: (i) the qualifications of the persons serving as members of the Board of Directors and the overall composition of the Board comply with the Sarbanes-Oxley Act, the Exchange Act and the listing rules of the NasdaqCM or any other national securities exchange, as the case may be, in the event the Company seeks to have any of its securities listed on another exchange or quoted on an automated quotation system , and (ii) if applicable, at least one member of the Audit Committee of the Board of Directors qualifies as an "audit committee financial expert," as such term is defined under Regulation S-K and the listing rules of the NasdaqCM.

7.2 Prohibition on Press Releases and Public Announcements. The Company shall not issue press releases or engage in any other publicity, without the Representative's prior written consent, for a period ending at 5:00 p.m., Eastern time, on the first (1st) Business Day following the fortieth (40th) day after the Closing Date, other than normal and customary releases issued in the ordinary course of the Company's business.

7.3 Right of First Refusal. Provided that the Public Securities are sold in accordance with the terms of this Agreement, the Representative shall have an irrevocable right of first refusal (the "**Right of First Refusal**"), for a period of twelve (12) months after the Effective Date to act as sole investment banker, sole bookrunner and/or sole placement agent, at the Representative's sole discretion, on the Representative's customary terms and conditions, for each and every public equity and debt offering (each, a "**Subject Transaction**"). The Company shall notify the Representative of its intention to pursue a Subject Transaction, including the material terms thereof, by providing written notice thereof by registered mail or overnight courier service addressed to the Representative. If the Representative fails to exercise its Right of First Refusal with respect to any Subject Transaction within ten (10) Business Days after the mailing of such written notice, then the Representative shall have no further claim or right with respect to the Subject Transaction. The Representative may elect, in its sole and absolute discretion, not to exercise its Right of First Refusal with respect to any Subject Transaction; *provided* that any such election by the Representative shall not adversely affect the Representative's Right of First Refusal with respect to any other Subject Transaction. The terms and conditions of any such engagements shall be set forth in separate agreements and may be subject to, among other things, satisfactory completion of due diligence by the Representative, market conditions, the absence of a material adverse change to the Company's business, financial condition and prospects, approval of the Representative's internal committee and any other conditions that the Representative may deem appropriate for transactions of such nature.

8. Effectiveness of this Agreement and Termination Thereof.

8.1 Effectiveness of the Agreement. This Agreement shall become effective when both the Company and the Representative have executed the same and delivered counterparts of such signatures to the other party.

8.2 Termination. The Representative shall have the right to terminate this Agreement at any time prior to any Closing Date, (i) if any domestic or international event or act or occurrence has materially disrupted, or in your opinion will in the immediate future materially disrupt, general securities markets in the United States; or (ii) if trading on the New York Stock Exchange or the NASDAQ Stock Market LLC shall have been suspended or materially limited, or minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required by FINRA or by order of the Commission or any other Governmental Entity having jurisdiction; or (iii) if the United States shall have become involved in a new war or an increase in major hostilities; or (iv) if a banking moratorium has been declared by a New York State or federal authority; or (v) if a moratorium on foreign exchange trading has been declared which materially adversely impacts the United States securities markets; or (vi) if the Company shall have sustained a material loss by fire, flood, accident, hurricane, earthquake, theft, sabotage or other calamity or malicious act which, whether or not such loss shall have been insured, will, in your opinion, make it inadvisable to proceed with the delivery of the Firm Shares or Additional Shares; or (vii) if the Company is in material breach of any of its representations, warranties or covenants hereunder; or (viii) if the Representative shall have become aware after the date hereof of a material adverse change in the conditions or prospects of the Company, or a material adverse change in general market conditions as in the Representative's reasonable judgment would make it impracticable to proceed with the offering, sale and/or delivery of the Public Securities or to enforce contracts made by the Underwriters for the sale of the Public Securities.

8.3 Expenses. Notwithstanding anything to the contrary in this Agreement, except in the case of a default by the Underwriters, pursuant to Section 6.2 above, in the event that this Agreement shall not be carried out for any reason whatsoever, within the time specified herein or any extensions thereof pursuant to the terms herein, the Company shall be obligated to pay to the Underwriters their actual and accountable out-of-pocket expenses related to the transactions contemplated herein then due and payable (including the fees and disbursements of Representative's Counsel) up to $100,000 for out-of-pocket accountable expenses, which was applied to non-accountable expenses, and upon demand the Company shall pay the full amount thereof to the Representative on behalf of the Underwriters; provided, however, that such expense cap in no way limits or impairs the indemnification and contribution provisions of this

Agreement. Notwithstanding the foregoing, any advance received by the Representative will be reimbursed to the Company to the extent not actually incurred in compliance with FINRA Rule 5110(f)(2)(C).

8.4 Survival of Indemnification. Notwithstanding any contrary provision contained in this Agreement, any election hereunder or any termination of this Agreement, and whether or not this Agreement is otherwise carried out, the provisions of Section 5 shall remain in full force and effect and shall not be in any way affected by, such election or termination or failure to carry out the terms of this Agreement or any part hereof.

8.5 Representations, Warranties, Agreements to Survive. All representations, warranties and agreements contained in this Agreement or in certificates of officers of the Company submitted pursuant hereto, shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of any Underwriter or its Affiliates or selling agents, any person controlling any Underwriter, its officers or directors or any person controlling the Company or (ii) delivery of and payment for the Public Securities.

9. Miscellaneous.

9.1 Notices. All communications hereunder, except as herein otherwise specifically provided, shall be in writing and shall be mailed (registered or certified mail, return receipt requested), personally delivered or sent by facsimile transmission and confirmed and shall be deemed given when so delivered or faxed and confirmed or if mailed, two (2) days after such mailing.

If to the Representative:

Aegis Capital Corp.
810 Seventh Avenue, 18th Floor
New York, New York 10019
Attn: Mr. David Bocchi, Managing Director of Investment Banking
Fax No.: (212) 813-1047

with a copy (which shall not constitute notice) to:
Blank Rome LLP
405 Lexington Avenue
New York, New York 10174
Attn: Brad L. Shiffman, Esq.
Fax No.: (917) 332-3725

If to the Company:

Jaguar Animal Health, Inc.
185 Berry Street, Suite 1300
San Francisco, California 94105
Attention: Ms. Lisa Conte, Chief Executive Officer
Fax No: (415) 371-8311

with a copy (which shall not constitute notice) to:

Reed Smith LLP
101 Second Street, Suite 1800

San Francisco, California 94105
Attention: Don Reinke, Esq.
Fax No: (415) 391-8269

9.2 Headings. The headings contained herein are for the sole purpose of convenience of reference, and shall not in any way limit or affect the meaning or interpretation of any of the terms or provisions of this Agreement.

9.3 Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(i) each Underwriter's responsibility to the Company is solely contractual in nature, each Underwriter has been retained solely to act as an underwriter in connection with the Offering and no fiduciary, advisory or agency relationship between the Company and the Underwriters has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether either the Representative has advised or is advising the Company on other matters;

(ii) the price of the Public Securities set forth in this Agreement was established by the Company following discussions and arm's-length negotiations with the Representative, and the Company is capable of evaluating and understanding, and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement; and

(iii) it has been advised that the Representative and their respective affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Underwriters have no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship.

9.4 Research Analyst Independence. The Company acknowledges that each Underwriter's research analysts and research departments are required to be independent from its investment banking division and are subject to certain regulations and internal policies, and that such Underwriter's research analysts may hold views and make statements or investment recommendations and/or publish research reports with respect to the Company and/or the offering that differ from the views of their investment banking division. The Company acknowledges that each Underwriter is a full service securities firm and as such from time to time, subject to applicable securities laws, rules and regulations, may effect transactions for its own account or the account of its customers and hold long or short

positions in debt or equity securities of the Company; provided, however, that nothing in this Section 9.4 shall relieve the Underwriter of any responsibility or liability it may otherwise bear in connection with activities in violation of applicable securities laws, rules or regulations.

9.5 Amendment. This Agreement may only be amended by a written instrument executed by each of the parties hereto.

9.6 Entire Agreement. This Agreement (together with the other agreements and documents being delivered pursuant to or in connection with this Agreement) constitutes the entire agreement of the parties hereto with respect to the subject matter hereof and thereof, and supersedes all prior agreements and understandings of the parties, oral and written, with respect to the subject matter hereof.

9.7 Binding Effect. This Agreement shall inure solely to the benefit of and shall be binding upon the Representative, the Underwriters, the Company and the controlling persons, directors and officers referred to in Section 5.2 hereof, and their respective successors, legal representatives, heirs and assigns, and no other person shall have or be construed to have any legal or equitable right, remedy or claim under or in respect of or by virtue of this Agreement or any provisions herein contained. The term "successors and assigns" shall not include a purchaser, in its capacity as such, of securities from any of the Underwriters.

9.8 Governing Law; Consent to Jurisdiction; Trial by Jury. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of New York, without giving effect to conflict of laws principles thereof. The Company hereby agrees that any action, proceeding or claim against it arising out of, or relating in any way to this Agreement shall be brought and enforced in the New York Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company hereby waives any

objection to such exclusive jurisdiction and that such courts represent an inconvenient forum. Any such process or summons to be served upon the Company may be served by transmitting a copy thereof by registered or certified mail, return receipt requested, postage prepaid, addressed to it at the address set forth in Section 9.1 hereof. Such mailing shall be deemed personal service and shall be legal and binding upon the Company in any action, proceeding or claim. The Company agrees that the prevailing party(ies) in any such action shall be entitled to recover from the other party(ies) all of its reasonable attorneys' fees and expenses relating to such action or proceeding and/or incurred in connection with the preparation therefor. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

9.9 Execution in Counterparts. This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute one and the same agreement, and shall become effective when one or more counterparts has been signed by each of the parties hereto and delivered to each of the other parties hereto. Delivery of a signed counterpart of this Agreement by facsimile or email/pdf transmission shall constitute valid and sufficient delivery thereof.

9.10 Waiver, etc. The failure of any of the parties hereto to at any time enforce any of the provisions of this Agreement shall not be deemed or construed to be a waiver of any such provision, nor to in any way effect the validity of this Agreement or any provision hereof or the right of any of the parties hereto to thereafter enforce each and every provision of this Agreement. No waiver of any breach, non-compliance or non-fulfillment of any of the provisions of this Agreement shall be effective unless set forth in a written instrument executed by the party or parties against whom or which enforcement of such waiver is sought; and no waiver of any such breach, non-compliance or non-fulfillment shall be construed or deemed to be a waiver of any other or subsequent breach, non-compliance or non-fulfillment.

[*Signature Page Follows*]

If the foregoing correctly sets forth the understanding between the Underwriters and the Company, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between us.

Very truly yours,

JAGUAR ANIMAL HEALTH, INC.

By: _____
Name:
Title:

Confirmed as of the date first written
above, on behalf of itself and as
Representative of the several Underwriters
named on Schedule 1 hereto:

AEGIS CAPITAL CORP.

By: _____
Name:
Title:

SCHEDULE 1

Underwriter	Total Number of Firm Shares to be Purchased	Number of Additional Shares to be Purchased if Over-Allotment Option is Fully Exercised
Aegis Capital Corp		
CRT Capital Group LLC		
Feltl and Company, Inc.		

SCHEDULE 2-A

Pricing Information

Number of Firm Shares:

Number of Additional Shares:

Public Offering Price per Share: $

Underwriting Discount per Share: $

Proceeds to Company per Share (before expenses): $

Underwriting Non-accountable expense allowance per Share: $

SCHEDULE 2-B

Issuer General Use Free Writing Prospectuses

Free writing prospectus filed with the SEC on [·], 2015

SCHEDULE 2-C

Written Testing-the-Waters Communications

None

SCHEDULE 3

List of Lock-Up Parties

EXHIBIT A

Form of Representative's Warrant Agreement

Reference is made to Exhibit 10.33 to the Registration Statement on Form S-1 (File Number 333-198383) of Jaguar Animal Health, Inc., which is incorporated by reference.

EXHIBIT B

Lock-Up Agreement

, 2015

Aegis Capital Corp.

810 Seventh Avenue, 18th Floor
New York, New York 10019

Ladies and Gentlemen:

The undersigned understands that Aegis Capital Corp. (the "**Representative**"), together with the several underwriters, proposes to enter into an Underwriting Agreement (the "**Underwriting Agreement** ") with Jaguar Animal Health, Inc., a Delaware corporation (the "**Company**"), providing for the public offering (the "**Public Offering**") of shares of common stock, par value $0.0001 per share, of the Company (the "**Shares**").

To induce the Representative to continue its efforts in connection with the Public Offering, the undersigned hereby agrees that, without the prior written consent of the Representative, the undersigned will not, during the period commencing on the effective date of the registration statement (the "**Registration Statement**") relating to the Public Offering and ending six (6) months after such date (the "**Lock-Up Period**"), (1) offer, pledge, sell, contract to sell, grant, lend, or otherwise transfer or dispose of, directly or indirectly, any Shares or any securities convertible into or exercisable or exchangeable for Shares, whether now owned or hereafter acquired by the undersigned or with respect to which the undersigned has or hereafter acquires the power of disposition (collectively, the "**Lock-Up Securities**"); (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Lock-Up Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Lock-Up Securities, in cash or otherwise; (3) make any demand for or exercise any right with respect to the registration of any Lock-Up Securities; or (4) publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap, hedge or other arrangement relating to any Lock-Up Securities. Notwithstanding the foregoing, and subject to the conditions below, the undersigned may transfer Lock-Up Securities without the prior written consent of the Representative in connection with (a) transactions relating to Lock-Up Securities acquired in open market transactions after the completion of the Public Offering; provided that no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), shall be required or shall be voluntarily made in connection with subsequent sales of Lock-Up Securities acquired in such open market transactions; (b) transfers of Lock-Up Securities as a *bona fide* gift, by will or intestacy or to a family member or trust for the benefit of a family member (for purposes of this lock-up agreement, "family member" means any relationship by blood, marriage, domestic partnership or adoption, not more remote than first cousin), or to any corporation, partnership, limited liability company or other entity all of the beneficial ownership interests of which are held exclusively by the undersigned or one or more family members of the undersigned; (c) transfers of Lock-Up Securities to a charity or educational institution; (d) if the undersigned, directly or indirectly, controls a corporation, partnership, limited liability company or other business entity, any transfers of Lock-Up Securities to any shareholder, partner or member of, or owner of similar equity interests in, the undersigned, as the case may be; (e) the surrender or forfeiture of Shares to the Company to satisfy tax withholding obligations upon exercise or vesting of stock options or equity awards; provided that any filing under Section 16 of the Exchange Act shall clearly indicate in the footnotes thereto that the filing relates to the surrender of Shares to the Company to satisfy tax withholding obligations upon exercise or vesting of stock options or equity awards, as applicable; (f) the transfer of Lock-Up Securities pursuant to a *bona fide* third-party tender offer, merger, consolidation or other similar transaction made to all holders of the Shares involving a "change of control" (defined below) of the Company; provided that in the event that the tender offer, merger, consolidation or other such transaction is not completed, the Lock-Up Securities owned by the undersigned shall remain subject to the restrictions contained in this letter agreement, and (g) except as otherwise prohibited by this letter agreement, any Shares purchased by the undersigned in this Offering; provided that in the case of any transfer pursuant to the foregoing clauses (b), (c) or (d), (i) any such transfer shall not involve a disposition for value, (ii) each transferee shall sign and deliver to the Representative a lock-up agreement substantially in the form of this lock-up agreement and (iii) no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the undersigned's Lock-Up Securities except in compliance with this lock-up agreement. For the purpose of clause (f) above, "change of control" shall mean the consummation of any *bona fide*

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third party tender offer, merger, consolidation or other similar transaction the result of which is that any "person" (as defined in Section 13(d)(3) of the Exchange Act), or group of persons, other than the Company, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of 50% of total voting power of the voting stock of the Company.

If the undersigned is an officer or director of the Company, (i) the undersigned agrees that the foregoing restrictions shall be equally applicable to any issuer-directed or "friends and family" Shares that the undersigned may purchase in the Public Offering; (ii) the Representative agrees that, at least three (3) business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of Lock-Up Securities, the Representative will notify the Company of the impending release or waiver; and (iii) the Company has agreed in the Underwriting Agreement to announce the impending release or waiver by press release through a major news service at least two (2) business days before the effective date of the release or waiver. Any release or waiver granted by the Representative hereunder to any such officer or director shall only be effective two (2) business days after the publication date of such press release. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a transfer of Lock-Up Securities not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this lock-up agreement to the extent and for the duration that such terms remain in effect at the time of such transfer.

No provision in this lock-up agreement shall be deemed to restrict or prohibit the exercise, exchange or conversion by the undersigned of any securities exercisable or exchangeable for or convertible into Shares, as applicable; provided that the undersigned does not transfer the Shares acquired on such exercise, exchange or conversion during the Lock-Up Period, unless otherwise permitted pursuant to the terms of this lock-up agreement. In addition, no provision herein shall be deemed to restrict or prohibit the entry into or modification of a so-called "10b5-1" plan at any time (other than the entry into or modification of such a plan in such a manner as to cause the sale of any Lock-Up Securities within the Lock-Up Period), or a sale of 100% of the Company's outstanding Shares, a merger or other similar transaction involving the Company.

The undersigned understands that the Company and the Representative are relying upon this lock-up agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this lock-up agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors and assigns.

The undersigned understands that, if the Underwriting Agreement is not executed by September 30, 2015 or if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Shares and warrants to purchase Shares to be sold thereunder, then this lock-up agreement shall be void and of no further force or effect.

[signature page follows]

Whether or not the Public Offering actually occurs depends on a number of factors, including market conditions. Any Public Offering will only be made pursuant to an Underwriting Agreement, the terms of which are subject to negotiation between the Company and the Representative.

Very truly yours,

_____
(Name - Please Print)

_____
(Signature)

_____
(Name of Signatory, in the case of entities - Please Print)

_____
(Title of Signatory, in the case of entities - Please Print)

Address:

EXHIBIT C

Form of Press Release

Jaguar Animal Health, Inc.

[Date]

Jaguar Animal Health, Inc. (the "**Company**") announced today that Aegis Capital Corp., acting as representative for the underwriters in the Company's recent public offering of the Company's common stock, is [waiving] [releasing] a lock-up restriction with respect to shares of the Company's common stock held by [certain officers, directors or other securityholders] [an officer, director or securityholder] of the Company. The [waiver] [release] will take effect on , 20 , and the shares may be sold on or after such date.

This press release is not an offer or sale of the securities in the United States or in any other jurisdiction where such offer or sale is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the Securities Act of 1933, as amended.

Exhibit 3.5

AMENDED AND RESTATED

BYLAWS

OF

JAGUAR ANIMAL HEALTH, INC.

(a Delaware corporation)

TABLE OF CONTENTS

AMENDED AND RESTATED BYLAWS
OF
JAGUAR ANIMAL HEALTH, INC.

ARTICLE I
CORPORATE OFFICES

1.1 REGISTERED OFFICE.

The registered office of Jaguar Animal Health, Inc. (the "Corporation") shall be fixed in the Corporation's certificate of incorporation, as the same may be amended from time to time (the "Certificate of Incorporation").

1.2 OTHER OFFICES.

The Corporation's board of directors (the "Board") may at any time establish other offices at any place or places where the Corporation is qualified to do business.

ARTICLE II
MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS.

Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the Board. The Board may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the General Corporation Law of the State of Delaware (the "DGCL"). In the absence of any such designation or determination, stockholders' meetings shall be held at the Corporation's principal executive office.

2.2 ANNUAL MEETING.

The Board shall designate the date and time of the annual meeting. At the annual meeting, directors shall be elected and other proper business properly brought before the meeting in accordance with Section 2.4 of these Bylaws may be transacted.

2.3 SPECIAL MEETING.

A special meeting of the stockholders may be called at any time by the Board, chairperson of the Board, chief executive officer or president (in the absence of a chief executive officer), but such special meetings may not be called by any other person or persons.

No business may be transacted at such special meeting other than the business specified in such notice to stockholders. Nothing contained in this paragraph of this Section 2.3 shall be construed as limiting, fixing, or affecting the time when a meeting of stockholders called by action of the Board may be held.

2.4 ADVANCE NOTICE PROCEDURES FOR BUSINESS BROUGHT BEFORE A MEETING.

(a) At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be (i) brought before the meeting by the Corporation and specified in the notice of meeting given by or at the direction of the Board, (ii) brought before the meeting by or at the direction of the Board, or (iii) otherwise properly brought before the meeting by a stockholder who (A) was a stockholder of record of the Corporation (and, with respect to any beneficial owner, if different, on whose behalf such business is proposed, only if such beneficial owner was the beneficial owner of shares of the Corporation) both at the time of giving the notice provided for in this Section 2.4 and at the time of the meeting, (B) is entitled to vote at the meeting, and (C) has complied with this Section 2.4 as to such business. Except for proposals properly made in accordance with Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (as so amended and inclusive of such rules and regulations, the "Exchange Act"), and included in the notice of meeting given by or at the direction of the Board, the foregoing clause (iii) shall be the exclusive means for a stockholder to propose business to be brought before an annual meeting of the stockholders. Stockholders shall not be permitted to propose business to be brought before a special meeting of the stockholders, and the only matters that may be brought before a special meeting are the matters specified in the notice of meeting given by or at the direction of the person calling the meeting pursuant to Section 2.3 of these Bylaws. Stockholders seeking to nominate persons for election to the Board must comply with Section 2.5 of these Bylaws, and this Section 2.4 shall not be applicable to nominations except as expressly provided in Section 2.5 of these Bylaws.

(b) Without qualification, for business to be properly brought before an annual meeting by a stockholder, the stockholder must (i) provide Timely Notice (as defined below) thereof in writing and in proper form to the secretary of the Corporation and (ii) provide any updates or supplements to such notice at the times and in the forms required by this Section 2.4. To be timely, a stockholder's notice must be delivered to, or mailed and received at, the principal executive offices of the Corporation not less than ninety (90) days nor more than one hundred twenty (120) days prior to the first anniversary of the preceding year's annual meeting; provided, however, that (x) if the date of the annual meeting is more than thirty (30) days before or more than sixty (60) days after such anniversary date or if no meeting was held in the preceding year or (y) with respect to the first annual meeting held after February 1, 2014, notice by the stockholder to be timely must be so delivered, or mailed and received, not earlier than the one hundred twentieth (120th) day prior to such annual meeting and not later than the ninetieth (90th) day prior to such annual meeting or, if later, the tenth (10th) day following the day on which public disclosure of the date of such annual meeting was first made (such notice within such time periods, "Timely Notice"). In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of Timely Notice as described above.

(c) To be in proper form for purposes of this Section 2.4, a stockholder's notice to the secretary of the Corporation shall set forth:

(i) As to each Proposing Person (as defined below), (A) the name and address of such Proposing Person (including, without limitation, if applicable, the name and address that appear on the Corporation's books and records) and (B) the class or series and number of shares of the Corporation that are, directly or indirectly, owned of record or beneficially owned (within the meaning of Rule 13d-3 under the Exchange Act) by such Proposing Person, except that such Proposing Person shall in all events be deemed to beneficially own any shares of any class or series of the Corporation as to which such Proposing Person has a right to acquire beneficial ownership at any time in the future (the disclosures to be made pursuant to the foregoing clauses (A) and (B) are referred to as "Stockholder Information");

(ii) As to each Proposing Person, (A) any derivative, swap or other transaction or series of transactions engaged in, directly or indirectly, by such Proposing Person, the purpose or effect of which is to give such Proposing Person economic risk similar to ownership of shares of any class or series of the Corporation, including, without limitation, due to the fact that the value of such derivative, swap or other transactions is determined by reference to the price, value or volatility of any shares of any class or series of the Corporation, or which derivative, swap or other transactions provide, directly or indirectly, the opportunity to profit from any increase in the price or value of shares of any class or series of the Corporation ("Synthetic Equity Interests"), which Synthetic Equity Interests shall be disclosed without regard to whether (x) the derivative, swap or other transactions convey any voting rights in such shares to such Proposing Person, (y) the derivative, swap or other transactions are required to be, or are capable of being, settled through delivery of such shares or (z) such Proposing Person may have entered into other transactions that hedge or mitigate the economic effect of such derivative, swap or other transactions, (B) any proxy (other than a revocable proxy or consent given in response to a solicitation made pursuant to, and in accordance with, Section 14(a) of the Exchange Act by way of a solicitation statement filed on Schedule 14A), agreement, arrangement, understanding or relationship pursuant to which such Proposing Person has or shares a right to vote any shares of any class or series of the Corporation, (C) any agreement, arrangement, understanding or relationship, including, without limitation, any repurchase or similar so-called "stock borrowing" agreement or arrangement, engaged in, directly or indirectly, by such Proposing Person, the purpose or effect of which is to mitigate loss to, reduce the economic risk (of ownership or otherwise) of shares of any class or series of the Corporation by, manage the risk of share price changes for, or increase or decrease the voting power of, such Proposing Person with respect to the shares of any class or series of the Corporation, or which provides, directly or indirectly, the opportunity to profit from any decrease in the price or value of the shares of any class or series of the Corporation ("Short Interests"), (D) any rights to dividends on the shares of any class or series of the Corporation owned beneficially by such Proposing Person that are separated or separable from the underlying shares of the Corporation, (E) any performance related fees (other than an asset based fee) that such Proposing Person is entitled to based on any increase or decrease in the price or value of shares of any class or series of the Corporation, or any Synthetic Equity Interests or Short Interests, if any, (F)(x) if such Proposing Person is not a natural person, the identity of the natural person or persons associated with such Proposing Person responsible for the formulation of and decision to propose the business to be brought before the meeting (such person or persons, the "Responsible Person"), the manner in which such Responsible Person was selected, any fiduciary duties owed by such Responsible Person to the equity holders or other beneficiaries of such Proposing Person, the

qualifications and background of such Responsible Person and any material interests or relationships of such Responsible Person that are not shared generally by any other record or beneficial holder of the shares of any class or series of the Corporation and that reasonably could have influenced the decision of such Proposing Person to propose such business to be brought before the meeting, and (y) if such Proposing Person is a natural person, the qualifications and background of such natural person and any material interests or relationships of such natural person that are not shared generally by any other record or beneficial holder of the shares of any class or series of the Corporation and that reasonably could have influenced the decision of such Proposing Person to propose such business to be brought before the meeting, (G) any significant equity interests or any Synthetic Equity Interests or Short Interests in any principal competitor of the Corporation held by such Proposing Persons, (H) any direct or indirect interest of such Proposing Person in any contract with the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation (including, without limitation, in any such case, any employment agreement, collective bargaining agreement or consulting agreement), (I) any pending or threatened litigation in which such Proposing Person is a party or material participant involving the Corporation or any of its officers or directors, or any affiliate of the Corporation, (J) any material transaction occurring during the prior twelve months between such Proposing Person, on the one hand, and the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation, on the other hand, (K) a summary of any material discussions regarding the business proposed to be brought before the meeting (x) between or among any of the Proposing Persons or (y) between or among any Proposing Person and any other record or beneficial holder of the shares of any class or series of the Corporation (including, without limitation, their names), and (L) any other information relating to such Proposing Person that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies or consents by such Proposing Person in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act (the disclosures to be made pursuant to the foregoing clauses (A) through (L) are referred to as "Disclosable Interests"); provided, however, that Disclosable Interests shall not include any such disclosures with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these Bylaws on behalf of a beneficial owner; and

(iii) As to each item of business that the stockholder proposes to bring before the annual meeting, (A) a reasonably brief description of the business desired to be brought before the annual meeting, the reasons for conducting such business at the annual meeting and any material interest in such business of each Proposing Person, (B) the text of the proposal or business (including, without limitation, the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend the Bylaws of the Corporation, the language of the proposed amendment), (C) a reasonably detailed description of all agreements, arrangements and understandings between or among any of the Proposing Persons or between or among any Proposing Person and any other person or entity (including, without limitation, their names) in connection with the proposal of such business by such stockholder, (D) a representation that the stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business, (E) a representation whether the Proposing Person intends or is part of a group which intends (1) to deliver a proxy statement and/or form of proxy to holders

of at least the percentage of the Corporation's outstanding capital stock required to approve or adopt the proposal and/or (2) otherwise to solicit proxies or votes from stockholders in support of such proposal, and (F) any other information relating to such item of business that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act; provided, however, that the disclosures required by this paragraph (c) shall not include any disclosures with respect to any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these Bylaws on behalf of a beneficial owner.

(d) For purposes of this Section 2.4, the term "Proposing Person" shall mean (i) the stockholder providing the notice of business proposed to be brought before an annual meeting, (ii) the beneficial owner or beneficial owners, if different, on whose behalf the notice of the business proposed to be brought before the annual meeting is made, (iii) any affiliate or associate (each within the meaning of Rule 12b-2 under the Exchange Act for the purposes of these Bylaws) of such stockholder or beneficial owner, and (iv) any other person with whom such stockholder or beneficial owner (or any of their respective affiliates or associates) is Acting in Concert (as defined below).

(e) A person shall be deemed to be "Acting in Concert" with another person for purposes of these Bylaws if such person knowingly acts (whether or not pursuant to an express agreement, arrangement or understanding) in concert with, or towards a common goal relating to the management, governance or control of the Corporation in parallel with, such other person where (i) each person is conscious of the other person's conduct or intent and this awareness is an element in their decision-making processes and (ii) at least one additional factor suggests that such persons intend to act in concert or in parallel, which such additional factors may include, without limitation, exchanging information (whether publicly or privately), attending meetings, conducting discussions, or making or soliciting invitations to act in concert or in parallel; provided, that a person shall not be deemed to be Acting in Concert with any other person solely as a result of the solicitation or receipt of revocable proxies or consents from such other person in response to a solicitation made pursuant to, and in accordance with, the Section 14(a) of the Exchange Act by way of a proxy or consent solicitation statement filed on Schedule 14A. A person Acting in Concert with another person shall be deemed to be Acting in Concert with any third party who is also Acting in Concert with such other person.

(f) A stockholder providing notice of business proposed to be brought before an annual meeting shall further update and supplement such notice, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.4 shall be true and correct as of the record date for determining stockholders entitled to notice of the annual meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the secretary of the Corporation at the principal executive offices of the Corporation not later than five (5) business days after the record date for determining stockholders entitled to notice of the annual meeting (in the case of the update and supplement required to be made as of the record date), and not later than eight (8) business days prior to the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not

practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof).

(g) Notwithstanding anything in these Bylaws to the contrary, no business shall be conducted at an annual meeting except in accordance with this Section 2.4. The presiding officer of an annual meeting shall, if the facts warrant, determine that the business was not properly brought before the meeting in accordance with this Section 2.4, and if he or she should so determine, he or she shall so declare to the meeting and any such business not properly brought before the meeting shall not be transacted.

(h) The foregoing notice requirements of this Section 2.4 shall be deemed satisfied by a stockholder with respect to business other than a nomination if the stockholder has notified the Corporation of his, her or its intention to present a proposal at an annual meeting in compliance with applicable rules and regulations promulgated under the Exchange Act and such stockholder's proposal has been included in a proxy statement that has been prepared by the Corporation to solicit proxies for such annual meeting. Nothing in this Section 2.4 shall be deemed to affect the rights of stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act.

(i) For purposes of these Bylaws, "public disclosure" shall mean disclosure in a press release reported by a national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

(j) Notwithstanding the foregoing provisions of this Section 2.4, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear at the annual meeting to present proposed business, such proposed business shall not be transacted, notwithstanding that proxies in respect of such vote may have been received by the Corporation. For purposes of this Section 2.4, to be considered a qualified representative of the stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the annual meeting and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the annual meeting.

2.5 ADVANCE NOTICE PROCEDURES FOR NOMINATIONS OF DIRECTORS.

(a) Nominations of any person for election to the Board at an annual meeting or at a special meeting (but only if the election of directors is a matter specified in the notice of meeting given by or at the direction of the person calling such special meeting) may be made at such meeting only (i) by or at the direction of the Board, including, without limitation, by any committee or persons appointed by the Board, or (ii) by a stockholder who (A) was a stockholder of record of the Corporation (and, with respect to any beneficial owner, if different, on whose behalf such nomination is proposed to be made, only if such beneficial owner was the beneficial owner of shares of the Corporation) both at the time of giving the notice provided for in this Section 2.5 and at the time of the meeting, (B) is entitled to vote at the meeting, and (C) has

complied with this Section 2.5 as to such nomination. The foregoing clause (ii) shall be the exclusive means for a stockholder to make any nomination of a person or persons for election to the Board to be considered by the stockholders at an annual meeting or special meeting.

(b) Without qualification, for a stockholder to make any nomination of a person or persons for election to the Board at an annual meeting, the stockholder must (i) provide Timely Notice (as defined in Section 2.4(b) of these Bylaws) thereof in writing and in proper form to the secretary of the Corporation and (ii) provide any updates or supplements to such notice at the times and in the forms required by this Section 2.5. Without qualification, if the election of directors is a matter specified in the notice of meeting given by or at the direction of the person calling such special meeting, then for a stockholder to make any nomination of a person or persons for election to the Board at a special meeting, the stockholder must (i) provide timely notice thereof in writing and in proper form to the secretary of the Corporation at the principal executive offices of the Corporation and (ii) provide any updates or supplements to such notice at the times and in the forms required by this Section 2.5. To be timely, a stockholder's notice for nominations to be made at a special meeting must be delivered to, or mailed and received at, the principal executive offices of the Corporation not earlier than the one hundred twentieth (120th) day prior to such special meeting and not later than the ninetieth (90th) day prior to such special meeting or, if later, the tenth (10th) day following the day on which public disclosure (as defined in Section 2.4(i) of these Bylaws) of the date of such special meeting was first made. In no event shall any adjournment or postponement of an annual meeting or special meeting or the announcement thereof commence a new time period for the giving of a stockholder's notice as described above.

(c) To be in proper form for purposes of this Section 2.5, a stockholder's notice to the secretary of the Corporation shall set forth:

(i) As to each Nominating Person (as defined below), the Stockholder Information (as defined in Section 2.4(c)(i) of these Bylaws) except that for purposes of this Section 2.5, the term "Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Section 2.4(c)(i);

(ii) As to each Nominating Person, any Disclosable Interests (as defined in Section 2.4(c)(ii), except that for purposes of this Section 2.5 the term "Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Section 2.4(c)(ii) and the disclosure in clause (L) of Section 2.4(c)(ii) shall be made with respect to the election of directors at the meeting);

(iii) As to each person whom a Nominating Person proposes to nominate for election as a director, (A) all information with respect to such proposed nominee that would be required to be set forth in a stockholder's notice pursuant to this Section 2.5 if such proposed nominee were a Nominating Person, (B) all information relating to such proposed nominee that is required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of directors in a contested election pursuant to Section 14(a) under the Exchange Act (including, without limitation, such proposed nominee's written consent to being named in the proxy statement as a nominee and to serving as a director if elected), (C) a description of all direct and indirect compensation and other material

monetary agreements, arrangements and understandings during the past three (3) years, and any other material relationships, between or among any Nominating Person, on the one hand, and each proposed nominee, his or her respective affiliates and associates and any other persons with whom such proposed nominee (or any of his or her respective affiliates and associates) is Acting in Concert (as defined in Section 2.4(e) of these Bylaws), on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Item 404 under Regulation S-K if such Nominating Person were the "registrant" for purposes of such rule and the proposed nominee were a director or executive officer of such registrant (the disclosures to be made pursuant to the foregoing clauses (A) through (C) are referred to as "Nominee Information"), (D) a representation that the Nominating Person is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such nomination, (E) a representation whether the Nominating Person intends or is part of a group which intends (1) to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the Corporation's outstanding capital stock reasonably believed by such Nominating Person to be sufficient to elect the nominee and/or (2) otherwise to solicit proxies or votes from stockholders in support of such nomination, and (F) a completed and signed questionnaire, representation and agreement as provided in Section 2.5(g); and

(iv) The Corporation may require any proposed nominee to furnish such other information (A) as may reasonably be required by the Corporation to determine the eligibility of such proposed nominee to serve as an independent director of the Corporation in accordance with any applicable

corporate governance policies that the Corporation has adopted or (B) that could be material to a reasonable stockholder's understanding of the independence or lack of independence of such proposed nominee.

(d) For purposes of this Section 2.5, the term "Nominating Person" shall mean (i) the stockholder providing the notice of the nomination proposed to be made at the meeting, (ii) the beneficial owner or beneficial owners, if different, on whose behalf the notice of the nomination proposed to be made at the meeting is made, (iii) any affiliate or associate of such stockholder or beneficial owner, and (iv) any other person with whom such stockholder or such beneficial owner (or any of their respective affiliates or associates) is Acting in Concert.

(e) A stockholder providing notice of any nomination proposed to be made at a meeting shall further update and supplement such notice, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.5 shall be true and correct as of the record date for determining stockholders entitled to notice of the meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the secretary of the Corporation at the principal executive offices of the Corporation not later than five (5) business days after the record date for determining stockholders entitled to notice of the meeting (in the case of the update and supplement required to be made as of the record date), and not later than eight (8) business days prior to the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof).

(f) Notwithstanding anything in these Bylaws to the contrary, no person shall be eligible for election as a director of the Corporation unless nominated in accordance with this Section 2.5. The presiding officer at the meeting shall, if the facts warrant, determine that a nomination was not properly made in accordance with this Section 2.5, and if he or she should so determine, he or she shall so declare such determination to the meeting and the defective nomination shall be disregarded.

(g) To be eligible to be a nominee for election as a director of the Corporation, the proposed nominee must deliver (in accordance with the time periods prescribed for delivery of notice under this Section 2.5) to the secretary of the Corporation at the principal executive offices of the Corporation a written questionnaire with respect to the background and qualification of such proposed nominee (which questionnaire shall be provided by the secretary upon written request) and a written representation and agreement (in form provided by the secretary upon written request) that such proposed nominee (i) is not and will not become a party to (A) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such proposed nominee, if elected as a director of the Corporation, will act or vote on any issue or question (a "Voting Commitment") that has not been disclosed to the Corporation or (B) any Voting Commitment that could limit or interfere with such proposed nominee's ability to comply, if elected as a director of the Corporation, with such proposed nominee's fiduciary duties under applicable law, (ii) is not, and will not become a party to, any agreement, arrangement or understanding with any person or entity other than the Corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director that has not been disclosed to the Corporation and (iii) would be in compliance, if elected as a director of the Corporation, and will comply with applicable publicly disclosed corporate governance, conflict of interest, confidentiality and stock ownership and trading policies and guidelines of the Corporation.

(h) In addition to the requirements of this Section 2.5 with respect to any nomination proposed to be made at a meeting, each Nominating Person shall comply with all applicable requirements of the Exchange Act with respect to any such nominations.

(i) Notwithstanding the foregoing provisions of this Section 2.5, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear at the meeting to present the proposed nomination, such proposed nomination shall not be considered, notwithstanding that proxies in respect of such vote may have been received by the Corporation. For purposes of this Section 2.5, to be considered a qualified representative of the stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the meeting.

2.6 NOTICE OF STOCKHOLDERS' MEETINGS.

Unless otherwise provided by law, the Certificate of Incorporation or these Bylaws, the notice of any meeting of stockholders shall be sent or otherwise given in accordance with either Section 2.7 or Section 8.1 of these Bylaws not less than ten (10) nor more than sixty (60) days

before the date of the meeting to each stockholder entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting. The notice shall specify the place, if any, date and hour of the meeting, the record date for determining the stockholders entitled to vote at the meeting (if such date is different from the record date for stockholders entitled to notice of the meeting), the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called.

2.7 MANNER OF GIVING NOTICE; AFFIDAVIT OF NOTICE.

Notice of any meeting of stockholders shall be deemed given:

(a) if mailed, when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the Corporation's records; or

(b) if electronically transmitted as provided in Section 8.1 of these Bylaws.

An affidavit of the secretary or an assistant secretary of the Corporation or of the transfer agent or any other agent of the Corporation that the notice has been given by mail or by a form of electronic transmission, as applicable, shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

2.8 QUORUM.

Unless otherwise required by law, the Certificate of Incorporation or these Bylaws, the holders of a majority in voting power of the capital stock issued and outstanding and entitled to vote, present in person, or by remote communication, if applicable, or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders. If, however, a quorum is not present or represented at any meeting of the stockholders, then either (a) the chairperson of the meeting or (b) a majority in voting power of the stockholders entitled to vote thereon, present in person, or by remote communication, if applicable, or represented by proxy, shall have power to adjourn the meeting from time to time in the manner provided in Section 2.9 of these Bylaws until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the meeting as originally noticed.

2.9 ADJOURNED MEETING; NOTICE.

When a meeting is adjourned to another time or place, unless these Bylaws otherwise require, notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date for determining the stockholders entitled to vote is fixed for the adjourned meeting, a notice of the adjourned

meeting shall be given to each stockholder of record entitled to vote at the adjourned meeting as of the record date for determining the stockholders entitled to notice of the adjourned meeting.

2.10 CONDUCT OF BUSINESS.

The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced at the meeting by the person presiding over the meeting. The Board may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board, the person presiding over any meeting of stockholders shall have the right and authority to convene and (for any or no reason) to recess and/or adjourn the meeting, to prescribe such rules, regulations and procedures (which need not be in writing) and to do all such acts as, in the judgment of such presiding person, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board or prescribed by the presiding person of the meeting, may include, without limitation, the following: (a) the establishment of an agenda or order of business for the meeting; (b) rules and procedures for maintaining order at the meeting and the safety of those present (including, without limitation, rules and procedures for removal of disruptive persons from the meeting); (c) limitations on attendance at or participation in the meeting to stockholders entitled to vote at the meeting, their duly authorized and constituted proxies or such other persons as the presiding person of the meeting shall determine; (d) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (e) limitations on the time allotted to questions or comments by participants. The presiding person at any meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting (including, without limitation, determinations with respect to the administration and/or interpretation of any of the rules, regulations or procedures of the meeting, whether adopted by the Board or prescribed by the person presiding over the meeting), shall, if the facts warrant, determine and declare to the meeting that a matter or business was not properly brought before the meeting and if such presiding person should so determine, such presiding person shall so declare to the meeting and any such matter or business not properly brought before the meeting shall not be transacted or considered. Unless and to the extent determined by the Board or the person presiding over the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

2.11 VOTING.

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.13 of these Bylaws, subject to Section 217 (relating to voting rights of fiduciaries, pledgors and joint owners of stock) and Section 218 (relating to voting trusts and other voting agreements) of the DGCL.

Except as may be otherwise provided in the Certificate of Incorporation or these Bylaws, each stockholder shall be entitled to one (1) vote for each share of capital stock held by such stockholder.

At all duly called or convened meetings of stockholders, at which a quorum is present, for the election of directors, a plurality of the votes cast shall be sufficient to elect a director.

Except as otherwise required by the Certificate of Incorporation, these Bylaws, the rules or regulations of any stock exchange applicable to the Corporation, or applicable law or pursuant to any regulation applicable to the Corporation or its securities, all other elections and questions presented to the stockholders at a duly called or convened meeting, at which a quorum is present, shall be decided by the affirmative vote of the holders of a majority in voting power of the votes cast affirmatively or negatively (excluding abstentions and broker non-votes) at the meeting by the holders entitled to vote thereon.

2.12 STOCKHOLDER ACTION BY WRITTEN CONSENT WITHOUT A MEETING.

Any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders of the Corporation and may not be effected by any consent in writing by such stockholders.

2.13 RECORD DATE FOR STOCKHOLDER NOTICE; VOTING.

In order that the Corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board, and which record date shall, unless otherwise required by law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If the Board so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination. If no record date is fixed by the Board, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of

stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance herewith at the adjourned meeting.

In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board may fix a record date, which shall not be more than sixty (60) days prior to such other action. If no such record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

2.14 PROXIES.

Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL. A proxy may be in the form of a telegram, cablegram or other means of electronic transmission which sets forth or is submitted with information from which it can be determined that the telegram, cablegram or other means of electronic transmission was authorized by the stockholder.

2.15 LIST OF STOCKHOLDERS ENTITLED TO VOTE.

The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting (provided, however, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the date of the meeting, the list shall reflect the stockholders entitled to vote as of the tenth day before the date of the meeting), arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The Corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least ten (10) days prior to the meeting: (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the Corporation's principal executive office. In the event that the Corporation determines to make the list available on an electronic network, the Corporation may take reasonable steps to ensure that such information is available only to stockholders of the Corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. Except as otherwise provided by law, the stock ledger shall be the only evidence as to the identity of the stockholders entitled to vote in person or by proxy and the number of shares held by each of them, and as to the stockholders entitled to examine the list of stockholders.

2.16 POSTPONEMENT AND CANCELLATION OF MEETING.

Any previously scheduled annual or special meeting of the stockholders may be postponed, and any previously scheduled annual or special meeting of the stockholders may be canceled, by resolution of the Board upon public notice given prior to the time previously scheduled for such meeting.

2.17 INSPECTORS OF ELECTION.

Before any meeting of stockholders, the Board shall appoint an inspector or inspectors of election to act at the meeting or its adjournment or postponement and make a written report thereof. The number of inspectors shall be either one (1) or three (3). If any person appointed as inspector fails to appear or fails or refuses to act, then the chairperson of the meeting may, and upon the request of any stockholder or a stockholder's proxy shall, appoint a person to fill that vacancy. Unless otherwise required by law, inspectors may be officers, employees or agents of the Corporation. Such inspectors shall have the duties prescribed by law and shall take charge of the polls and, when the vote is completed, shall make a certificate of the result of the vote taken and of such other facts as may be required by law. The inspectors of election shall perform their duties impartially, in good faith, to the best of their ability and as expeditiously as is practical and shall take and sign the oath contemplated by Section 231 of the DGCL. If there are three (3) inspectors of election, the decision, act or certificate of a majority is effective in all respects as the decision, act or certificate of all. Any report or certificate made by the inspectors of election is prima facie evidence of the facts stated therein.

ARTICLE III
DIRECTORS

3.1 POWERS.

Subject to the provisions of the DGCL and any limitations in the Certificate of Incorporation, the business and affairs of the Corporation shall be managed and all corporate powers shall be exercised by or under the direction of the Board.

3.2 NUMBER OF DIRECTORS.

The authorized number of directors shall be determined from time to time by resolution of the Board, provided the Board shall consist of at least one (1) member. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

3.3 ELECTION, QUALIFICATION AND TERM OF OFFICE OF DIRECTORS.

Except as provided in Section 3.4 of these Bylaws, each director, including, without limitation, a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until such director's successor is elected and qualified or until such director's earlier death, resignation or removal.

Directors need not be stockholders unless so required by the Certificate of Incorporation or these Bylaws. The Certificate of Incorporation or these Bylaws may prescribe other qualifications for directors.

If so provided in the Certificate of Incorporation, the directors of the Corporation shall be divided into three (3) classes.

3.4 RESIGNATION AND VACANCIES.

Any director may resign at any time upon notice given in writing or by electronic transmission to the Corporation. When one or more directors so resigns and the resignation is effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office as provided in this section in the filling of other vacancies.

Unless otherwise provided in the Certificate of Incorporation or these Bylaws, vacancies and newly created directorships resulting from any increase in the authorized number of directors shall, unless the Board determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by a majority of the directors then in office, although less than a quorum, or by a sole remaining director. Any director elected in accordance with the preceding sentence shall serve for a term expiring on the next election of the class for which such director shall have been chosen and shall remain in office until such director's successor shall have been elected and qualified or such director's death, resignation or removal. A vacancy in the Board shall be deemed to exist under these Bylaws in the case of the death, removal or resignation of any director.

3.5 PLACE OF MEETINGS; MEETINGS BY TELEPHONE.

The Board may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, members of the Board, or any committee designated by the Board, may participate in a meeting of the Board, or any committee, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting pursuant to this bylaw shall constitute presence in person at the meeting.

3.6 REGULAR MEETINGS.

Regular meetings of the Board may be held without notice at such time and at such place as shall from time to time be determined by the Board.

3.7 SPECIAL MEETINGS; NOTICE.

Special meetings of the Board for any purpose or purposes may be called at any time by the chairperson of the Board, the chief executive officer, the president, the secretary or a majority of the directors then in office.

Notice of the time and place of special meetings shall be:

(a) delivered personally by hand, by courier or by telephone;

(b) sent by United States first-class mail, postage prepaid;

(c) sent by facsimile; or

(d) sent by electronic mail,

directed to each director at that director's address, telephone number, facsimile number or electronic mail address, as the case may be, as shown on the Corporation's records.

If the notice is (a) delivered personally by hand, by courier or by telephone, (b) sent by facsimile, or (c) sent by electronic mail, it shall be delivered or sent at least twenty-four (24) hours before the time of the holding of the meeting. If the notice is sent by United States mail, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. Any oral notice may be communicated to the director. The notice need not specify the place of the meeting (if the meeting is to be held at the Corporation's principal executive office) nor the purpose of the meeting.

3.8 QUORUM.

The greater of (a) a majority of the directors at any time in office and (b) one-third of the number of directors established by the Board pursuant to Section 3.2 of these Bylaws shall constitute a quorum of the Board for the transaction of business. The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute, the Certificate of Incorporation or these Bylaws. If a quorum is not present at any meeting of the Board, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

3.9 BOARD ACTION BY CONSENT WITHOUT A MEETING.

Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board, or of any committee thereof, may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing or by electronic transmission and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

3.10 FEES AND COMPENSATION OF DIRECTORS.

Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, the Board shall have the authority to fix the compensation of directors.

3.11 REMOVAL OF DIRECTORS.

Subject to the rights of the holders of the shares of any series of Preferred Stock, the Board or any individual director may be removed from office only for cause and only by the affirmative vote of the holders of at least seventy-five percent (75%) in voting power of the outstanding shares of capital stock of the Corporation entitled to vote thereon.

ARTICLE IV
COMMITTEES

4.1 COMMITTEES OF DIRECTORS.

The Board may designate one (1) or more committees, each committee to consist of one (1) or more of the directors of the Corporation. The Board may designate one (1) or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board or in these Bylaws, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (a) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (b) adopt, amend or repeal any bylaw of the Corporation.

4.2 COMMITTEE MINUTES.

Each committee shall keep regular minutes of its meetings and report the same to the Board when required.

4.3 MEETINGS AND ACTION OF COMMITTEES.

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of:

(a) Section 3.5 of these Bylaws (place of meetings and meetings by telephone);

(b) Section 3.6 of these Bylaws (regular meetings);

(c) Section 3.7 of these Bylaws (special meetings and notice);

(d) Section 3.8 of these Bylaws (quorum);

(e) Section 3.9 of these Bylaws (action without a meeting); and

(f) Section 7.12 of these Bylaws (waiver of notice);

with such changes in the context of those Bylaws as are necessary to substitute the committee and its members for the Board and its members. However:

(i) the time of regular meetings of committees may be determined either by resolution of the Board or by resolution of the committee;

(ii) special meetings of committees may also be called by resolution of the Board; and

(iii) notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The Board may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws.

ARTICLE V
OFFICERS

5.1 OFFICERS.

The officers of the Corporation shall be a president, treasurer and a secretary. The Corporation may also have, at the discretion of the Board, a chairperson of the Board, a vice chairperson of the Board, a chief executive officer, a chief financial officer, one (1) or more vice presidents, one (1) or more assistant vice presidents, one (1) or more assistant treasurers, one (1) or more assistant secretaries, and any such other officers as may be appointed in accordance with the provisions of these Bylaws. Any number of offices may be held by the same person.

5.2 APPOINTMENT OF OFFICERS.

The Board shall appoint the officers of the Corporation, except such officers as may be appointed in accordance with the provisions of Section 5.3 of these Bylaws, subject to the rights, if any, of an officer under any contract of employment.

5.3 SUBORDINATE OFFICERS.

The Board may appoint, or empower the chief executive officer or, in the absence of a chief executive officer, the president, to appoint, such other officers and agents as the business of the Corporation may require. Each of such officers and agents shall hold office for such period, have such authority, and perform such duties as are provided in these Bylaws or as the Board may from time to time determine.

5.4 REMOVAL AND RESIGNATION OF OFFICERS.

Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by the Board at any regular or special meeting of the Board or, except in the case of an officer chosen by the Board, by any officer upon whom such power of removal may be conferred by the Board.

Any officer may resign at any time by giving written notice to the Corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice. Unless otherwise specified in the notice of resignation, the acceptance of the

resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the Corporation under any contract to which the officer is a party.

5.5 VACANCIES IN OFFICES.

Any vacancy occurring in any office of the Corporation shall be filled by the Board or as provided in Sections 5.2 and 5.3 of these Bylaws.

5.6 REPRESENTATION OF SHARES OF OTHER CORPORATIONS.

The chairperson of the Board, the president, any vice president, the treasurer, the secretary or assistant secretary of this Corporation, or any other person authorized by the Board or the president or a vice president, is authorized to vote, represent and exercise on behalf of this Corporation all rights incident to any and all securities of any other entity or entities standing in the name of this Corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

5.7 AUTHORITY AND DUTIES OF OFFICERS.

All officers of the Corporation shall respectively have such authority and perform such duties in the management of the business of the Corporation as may be designated from time to time by the Board and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the Board.

ARTICLE VI
RECORDS AND REPORTS

6.1 MAINTENANCE OF RECORDS.

The Corporation shall, either at its principal executive office or at such place or places as designated by the Board, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these Bylaws as amended to date, accounting books and other records.

ARTICLE VII
GENERAL MATTERS

7.1 EXECUTION OF CORPORATE CONTRACTS AND INSTRUMENTS.

The Board, except as otherwise provided in these Bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the Corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the Board or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the Corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

7.2 STOCK CERTIFICATES; PARTLY PAID SHARES.

The shares of the Corporation shall be represented by certificates or shall be uncertificated. Certificates for the shares of stock, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock represented by a certificate shall be entitled to have a certificate signed by, or in the name of the Corporation by the chairperson or vice-chairperson of the Board, or the president or vice-president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary of the Corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

The Corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, or upon the books and records of the Corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the Corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

7.3 SPECIAL DESIGNATION ON CERTIFICATES.

If the Corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the Corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the DGCL, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate that the Corporation shall issue to represent such class or series of stock a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

7.4 LOST CERTIFICATES.

Except as provided in this Section 7.4, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the Corporation and cancelled at the same time. The Corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to give the Corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged

loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

7.5 CONSTRUCTION; DEFINITIONS.

Unless the context requires otherwise, the general provisions, rules of construction and definitions in the DGCL shall govern the construction of these Bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

7.6 DIVIDENDS.

The Board, subject to any restrictions contained in either (a) the DGCL or (b) the Certificate of Incorporation, may declare and pay dividends upon the shares of its capital stock. Dividends may be paid in cash, in property or in shares of the Corporation's capital stock.

The Board may set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the Corporation, and meeting contingencies.

7.7 FISCAL YEAR.

The fiscal year of the Corporation shall be fixed by resolution of the Board and may be changed by the Board.

7.8 SEAL.

The Corporation may adopt a corporate seal, which shall be adopted and which may be altered by the Board. The Corporation may use the corporate seal by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

7.9 TRANSFER OF STOCK.

Shares of the Corporation shall be transferable in the manner prescribed by law and in these Bylaws. Shares of stock of the Corporation shall be transferred on the books of the Corporation only by the holder of record thereof or by such holder's attorney duly authorized in writing, upon surrender to the Corporation of the certificate or certificates representing such shares endorsed by the appropriate person or persons (or by delivery of duly executed instructions with respect to uncertificated shares), with such evidence of the authenticity of such endorsement or execution, transfer, authorization and other matters as the Corporation may reasonably require, and accompanied by all necessary stock transfer stamps. No transfer of stock shall be valid as against the Corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing the names of the persons from and to whom it was transferred.

7.10 STOCK TRANSFER AGREEMENTS.

The Corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the Corporation to restrict the transfer of shares of stock of the Corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

7.11 REGISTERED STOCKHOLDERS.

The Corporation:

(a) shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner;

(b) shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares; and

(c) shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

7.12 WAIVER OF NOTICE.

Whenever notice is required to be given under any provision of the DGCL, the Certificate of Incorporation or these Bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the Certificate of Incorporation or these Bylaws.

7.13 SELECTION OF FORUM.

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for (a) any derivative action or proceeding brought on behalf of the Corporation, (b) any action asserting a claim of breach of fiduciary duty owed by, or other wrongdoing by, any director, officer, employee or agent of the Corporation to the Corporation or the Corporation's stockholders, (c) any action asserting a claim arising pursuant to any provision of the General Corporation Law of the State of Delaware or the Certificate of Incorporation or the Bylaws of the Corporation, (d) any action to interpret, apply, enforce or determine the validity of the Certificate of Incorporation or the Bylaws of the Corporation, or (e) any action asserting a claim governed by the internal affairs doctrine, in each case subject to said Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein (or such indispensable parties consenting to the personal jurisdiction of the Court of Chancery

with 10 days following any determination by the Court of Chancery that an indispensable party is not subject to such personal jurisdiction); provided that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. To the fullest extent permitted by applicable law, any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Corporation shall be deemed to have notice of, and to have consented to, the provisions of this Section 7.13. Notwithstanding any other provisions of law, the Certificate of Incorporation or the Bylaws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least seventy-five percent (75%) in voting power of the outstanding shares of capital stock of the Corporation entitled to vote thereon shall be required to amend or repeal, or to adopt any provision inconsistent with, this Section 7.13. If any provision or provisions of this Section 7.13 shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Section 7.13 (including, without limitation, each portion of any sentence of this Section 7.13 containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

ARTICLE VIII
NOTICE BY ELECTRONIC TRANSMISSION

8.1 NOTICE BY ELECTRONIC TRANSMISSION.

Without limiting the manner by which notice otherwise may be given effectively to stockholders pursuant to the DGCL, the Certificate of Incorporation or these Bylaws, any notice to stockholders given by the Corporation under any provision of the DGCL, the Certificate of Incorporation or these Bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the Corporation. Any such consent shall be deemed revoked if:

(c) the Corporation is unable to deliver by electronic transmission two (2) consecutive notices given by the Corporation in accordance with such consent; and

(d) such inability becomes known to the secretary or an assistant secretary of the Corporation or to the transfer agent, or other person responsible for the giving of notice.

However, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action.

Any notice given pursuant to the preceding paragraph shall be deemed given:

(a) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice;

(b) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice;

(c) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (i) such posting and (ii) the giving of such separate notice; and

(d) if by any other form of electronic transmission, when directed to the stockholder.

An affidavit of the secretary or an assistant secretary of the Corporation or of the transfer agent or other agent of the Corporation that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

8.2 DEFINITION OF ELECTRONIC TRANSMISSION.

For the purposes of these Bylaws, an "electronic transmission" means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

ARTICLE IX
INDEMNIFICATION AND ADVANCEMENT

9.1 ACTIONS, SUITS AND PROCEEDINGS OTHER THAN BY OR IN THE RIGHT OF THE CORPORATION.

The Corporation shall indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation) by reason of the fact that he or she is or was, or has agreed to become, a director or officer of the Corporation, or, while a director or officer of the Corporation, is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including, without limitation, any employee benefit plan) (all such persons being referred to hereafter as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including, without limitation, attorneys' fees), liabilities, losses, judgments, fines (including, without limitation, excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974), and amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that Indemnitee did not act in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests

of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his or her conduct was unlawful.

9.2 ACTIONS OR SUITS BY OR IN THE RIGHT OF THE CORPORATION.

The Corporation shall indemnify any Indemnitee who was or is a party to or threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that Indemnitee is or was, or has agreed to become, a director or officer of the Corporation, or, while a director or officer of the Corporation, is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including, without limitation, any employee benefit plan), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including, without limitation, attorneys' fees) actually and reasonably incurred by or on behalf of Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if Indemnitee acted in good faith and in a manner which Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Corporation, except that no indemnification shall be made under this Section 9.2 in respect of any claim, issue or matter as to which Indemnitee shall have been adjudged to be liable to the Corporation, unless, and only to the extent, that the Court of Chancery of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of such liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnity for such expenses (including, without limitation, attorneys' fees) which the Court of Chancery of Delaware or such other court shall deem proper.

9.3 INDEMNIFICATION FOR EXPENSES OF SUCCESSFUL PARTY.

Notwithstanding any other provisions of this Article IX, to the extent that an Indemnitee has been successful, on the merits or otherwise, in defense of any action, suit or proceeding referred to in Sections 9.1 and 9.2 of these Bylaws, or in defense of any claim, issue or matter therein, or on appeal from any such action, suit or proceeding, Indemnitee shall be indemnified against all expenses (including, without limitation, attorneys' fees) actually and reasonably incurred by or on behalf of Indemnitee in connection therewith.

9.4 NOTIFICATION AND DEFENSE OF CLAIM.

As a condition precedent to an Indemnitee's right to be indemnified, such Indemnitee must notify the Corporation in writing as soon as practicable of any action, suit, proceeding or investigation involving such Indemnitee for which indemnity will or could be sought. With respect to any action, suit, proceeding or investigation of which the Corporation is so notified, the Corporation will be entitled to participate therein at its own expense and/or to assume the defense thereof at its own expense, with legal counsel reasonably acceptable to Indemnitee. After notice from the Corporation to Indemnitee of its election so to assume such defense, the Corporation shall not be liable to Indemnitee for any legal or other expenses subsequently incurred by Indemnitee in connection with such action, suit, proceeding or investigation, other than as provided below in this Section 9.4. Indemnitee shall have the right to employ his or her own legal counsel in connection with such action, suit, proceeding or investigation, but the fees

and expenses of such legal counsel incurred after notice from the Corporation of its assumption of the defense thereof shall be at the expense of Indemnitee unless (a) the employment of legal counsel by Indemnitee has been authorized by the Corporation, (b) legal counsel to Indemnitee shall have reasonably concluded, and shall have advised the Corporation in writing, that there is a conflict of interest on any significant issue between the Corporation and Indemnitee in the conduct of the defense of such action, suit, proceeding or investigation, or (c) the Corporation shall not in fact have employed legal counsel to assume the defense of such action, suit, proceeding or investigation, in each of which cases the fees and expenses of legal counsel for Indemnitee shall be at the expense of the Corporation, except as otherwise expressly provided by this Article IX. The Corporation shall not be entitled, without the consent of Indemnitee, to assume the defense of any claim brought by or in the right of the Corporation or as to which legal counsel for Indemnitee shall have reasonably made the conclusion, and delivered the notice, provided for in clause (b) above. The Corporation shall not be required to indemnify Indemnitee under this Article IX for any amounts paid in settlement of any action, suit, proceeding or investigation effected without its written consent. The Corporation shall not settle any action, suit, proceeding or investigation in any manner which would impose any penalty or limitation on Indemnitee without Indemnitee's written consent. Neither the Corporation nor Indemnitee will unreasonably withhold or delay its consent to any proposed settlement.

9.5 ADVANCE OF EXPENSES.

Subject to the provisions of Sections 9.4 and 9.6 of these Bylaws, in the event of any threatened or pending action, suit, proceeding or investigation of which the Corporation receives notice under this Article IX, any expenses (including, without limitation, attorneys' fees) incurred by or on behalf of Indemnitee in defending an action, suit, proceeding or investigation or any appeal therefrom shall be paid by the Corporation in advance of the final disposition of such matter; provided, however, that the payment of such expenses incurred by or on behalf of Indemnitee in advance of the final disposition of such matter shall be made only

upon receipt of an undertaking by or on behalf of Indemnitee to repay all amounts so advanced in the event that it shall ultimately be determined by final judicial decision from which there is no further right to appeal that Indemnitee is not entitled to be indemnified by the Corporation as authorized in this Article IX. Such undertaking shall be accepted without reference to the financial ability of Indemnitee to make such repayment.

9.6 PROCEDURE FOR INDEMNIFICATION AND ADVANCEMENT OF EXPENSES.

In order to obtain indemnification or advancement of expenses pursuant to Section 9.1, 9.2, 9.3 or 9.5 of these Bylaws, an Indemnitee shall submit to the Corporation a written request. Any such advancement of expenses shall be made promptly, and in any event within 60 days after receipt by the Corporation of the written request of Indemnitee, unless (a) the Corporation has assumed the defense pursuant to Section 9.4 of these Bylaws (and none of the circumstances described in Section 9.4 of these Bylaws that would nonetheless entitle the Indemnitee to indemnification for the fees and expenses of separate legal counsel have occurred) or (b) the Corporation determines within such 60-day period that Indemnitee did not meet the applicable standard of conduct set forth in Section 9.1, 9.2 or 9.5 of these Bylaws, as the case may be. Any such indemnification, unless ordered by a court, shall be made with respect to requests under

Section 9.1 or 9.2 of these Bylaws only as authorized in the specific case upon a determination by the Corporation that the indemnification of Indemnitee is proper because Indemnitee has met the applicable standard of conduct set forth in Section 9.1 or 9.2 of these Bylaws, as the case may be. Such determination shall be made in each instance (a) by a majority vote of the directors of the Corporation consisting of persons who are not at that time parties to the action, suit or proceeding in question ("disinterested directors"), whether or not a quorum, (b) by a committee of disinterested directors designated by majority vote of disinterested directors, whether or not a quorum, (c) if there are no disinterested directors, or if the disinterested directors so direct, by independent legal counsel (who may, to the extent permitted by law, be regular legal counsel to the Corporation) in a written opinion, or (d) by the stockholders of the Corporation.

9.7 REMEDIES.

The right to indemnification or advancement of expenses as granted by this Article IX shall be enforceable by Indemnitee in any court of competent jurisdiction. Neither the failure of the Corporation to have made a determination prior to the commencement of such action that indemnification is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Corporation pursuant to Section 9.6 of these Bylaws that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct. In any suit brought by Indemnitee to enforce a right to indemnification or advancement, or brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall have the burden of proving that Indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article IX. Indemnitee's expenses (including, without limitation, attorneys' fees) reasonably incurred in connection with successfully establishing Indemnitee's right to indemnification or advancement, in whole or in part, in any such proceeding shall also be indemnified by the Corporation to the fullest extent permitted by law. Notwithstanding the foregoing, in any suit brought by Indemnitee to enforce a right to indemnification hereunder it shall be a defense that the Indemnitee has not met any applicable standard for indemnification set forth in the DGCL.

9.8 LIMITATIONS.

Notwithstanding anything to the contrary in this Article IX, except as set forth in Section 9.7 of these Bylaws, the Corporation shall not indemnify, nor advance expenses to, an Indemnitee pursuant to this Article IX in connection with a proceeding (or part thereof) initiated by such Indemnitee unless the initiation thereof was approved by the Board. Notwithstanding anything to the contrary in this Article IX, the Corporation shall not indemnify (or advance expenses to) an Indemnitee to the extent such Indemnitee is reimbursed (or advanced expenses) from the proceeds of insurance, and in the event the Corporation makes any indemnification (or advancement) payments to an Indemnitee and such Indemnitee is subsequently reimbursed from the proceeds of insurance, such Indemnitee shall promptly refund indemnification (or advancement) payments to the Corporation to the extent of such insurance reimbursement.

9.9 SUBSEQUENT AMENDMENT.

No amendment, termination or repeal of this Article IX or of the relevant provisions of the DGCL or any other applicable laws shall adversely affect or diminish in any way the rights of any Indemnitee to indemnification or advancement of expenses under the provisions hereof with respect to any action, suit, proceeding or investigation arising out of or relating to any actions, transactions or facts occurring prior to the final adoption of such amendment, termination or repeal.

9.10 OTHER RIGHTS.

The indemnification and advancement of expenses provided by this Article IX shall not be deemed exclusive of any other rights to which an Indemnitee seeking indemnification or advancement of expenses may be entitled under any law (common or statutory), agreement or vote of stockholders or disinterested directors or otherwise, both as to action in Indemnitee's official capacity and as to action in any other capacity while holding office for the Corporation, and shall continue as to an Indemnitee who has ceased to be a director or officer, and shall inure to the benefit of the estate, heirs, executors and administrators of Indemnitee. Nothing contained in this Article IX shall be deemed to prohibit, and the Corporation is specifically authorized to enter into, agreements with officers and directors providing indemnification and advancement rights and procedures different from those set forth in this Article IX. In addition, the Corporation may, to the extent authorized from time to time by the Board, grant indemnification and advancement rights to other employees or agents of the Corporation or other persons serving the Corporation and such rights may be equivalent to, or greater or less than, those set forth in this Article IX.

9.11 PARTIAL INDEMNIFICATION.

If an Indemnitee is entitled under any provision of this Article IX to indemnification by the Corporation for some or a portion of the expenses (including, without limitation, attorneys' fees), liabilities, losses, judgments, fines (including, without limitation, excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974) or amounts paid in settlement actually and reasonably incurred by or on behalf of Indemnitee in connection with any action, suit, proceeding or investigation and any appeal therefrom but not, however, for the total amount thereof, the Corporation shall nevertheless indemnify Indemnitee for the portion of such expenses (including, without limitation, attorneys' fees), liabilities, losses, judgments, fines (including, without limitation, excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974) or amounts paid in settlement to which Indemnitee is entitled.

9.12 INSURANCE.

The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise (including, without limitation, any employee benefit plan) against any expense, liability or loss incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the DGCL.

9.13 SAVINGS CLAUSE.

If this Article IX or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify each Indemnitee as to any expenses (including, without limitation, attorneys' fees), liabilities, losses, judgments, fines (including, without limitation, excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974) and amounts paid in settlement in connection with any action, suit, proceeding or investigation, whether civil, criminal or administrative, including, without limitation, an action by or in the right of the Corporation, to the fullest extent permitted by any applicable portion of this Article IX that shall not have been invalidated and to the fullest extent permitted by applicable law.

9.14 DEFINITIONS.

Terms used in this Article IX and defined in Section 145(h) and Section 145(i) of the DGCL shall have the respective meanings assigned to such terms in such Section 145(h) and Section 145(i).

ARTICLE X
AMENDMENTS

Subject to the limitations set forth in Section 9.9 of these Bylaws or the provisions of the Certificate of Incorporation, the Board is expressly empowered to adopt, amend or repeal the Bylaws of the Corporation. Subject to the limitations set forth in Section 9.9 of these Bylaws or the provisions of the Certificate of Incorporation, the stockholders also shall have the power to adopt, amend or repeal the Bylaws of the Corporation.

AMENDED AND RESTATED
STANDBY BRIDGE FINANCING AGREEMENT

Dated as of December 3, 2014

By and Among

GPB LIFE SCIENCE HOLDINGS LLC (CO-LENDER)

31 GROUP LLC (CO-LENDER)

and

JAGUAR ANIMAL HEALTH, INC. (BORROWER)

AMENDED AND RESTATED
STANDBY BRIDGE FINANCING AGREEMENT

THIS AMENDED AND RESTATED STANDBY BRIDGE FINANCING AGREEMENT (the "Agreement") is made as of December 3, 2014, by and among 31 GROUP, LLC ("31 Group") and GPB Life Science Holdings LLC ("GPB," together with 31 Group, collectively, the "Lenders," with each being a "Lender"), and JAGUAR ANIMAL HEALTH, INC. (together with all of the its permitted successors and/or current or future wholly-owned partially owned, direct and/or indirect Subsidiaries, collectively, the "Borrower").

WHEREAS, Borrower and the Lenders are parties to that certain Standby Bridge Financing Agreement dated as of October 30, 2014 (the "Existing Financing Agreement"); and

WHEREAS, Borrower and the Lenders desire to amend and restate the Existing Financing Agreement in its entirety pursuant to the terms hereof.

THE PARTIES HERETO agree that the Existing Financing Agreement is hereby amended and restated in its entirety as follows:

ARTICLE 1.

DEFINITIONS

Section 1.01. Defined Terms. In addition to terms defined elsewhere in this Agreement or any Supplement or Exhibit hereto, when used herein, the following terms shall have the following meanings:

"Account Debtor" shall mean any Person who is or who may become obligated to Borrower under, with respect to, or on account of an Account Receivable or other Collateral.

"Accounts Receivable" shall mean any and all accounts (as such term is defined in the UCC) of Borrower and each and every right of Borrower to (i) the payment of money or (ii) the receipt or disbursement of products, goods, services or other valuable consideration, whether such right now exists or hereafter arises, whether such right arises out of a sale, lease or other disposition of Inventory, or out of a rendering of services, or out of a policy of insurance issued or to be issued, or from a secondary obligation or arising out of the use of a credit or charge card or information contained on or for use with such card, incurred or to be incurred, or any other transaction or event, whether such right is created, generated or earned by Borrower or by some other Person who subsequently transfers its interest to Borrower, whether such right is or is not already earned by performance, and howsoever such right may be evidenced, together with all other rights and interests (including all liens and security interests) which Borrower may at any time have by law or agreement against any Account Debtor or other Person obligated to make any such payment or against any property of such Account Debtor or other Person.

"Affiliate" shall mean any Person which, directly or indirectly, owns or controls, on an aggregate basis, at least a five percent (5%) interest in any other Person, or which is controlled by or is under common control with any other Person.

"Business Day" shall mean any day other than a Saturday or Sunday or any other day on which the Federal Reserve Bank of New York is not open for business.

"Closing Date" shall mean the date that the Notes are purchased form the Borrower by the Lenders pursuant to this Agreement.

"Collateral" shall mean all of the assets of Borrower, howsoever arising, wherever located and whether now owned or existing or hereafter existing or acquired, including, but not limited to, the following:

(i) all Equipment;

(ii) all Accounts Receivable;

(iii) all Inventory;

(iv) any and all monies, reserves, deposits, deposit accounts, securities, cash, cash equivalents, balances, credits, and interest and dividends on any of the foregoing;

(v) all chattel paper, whether tangible or electronic chattel paper, contract rights, letter of credit rights, documents and instruments and all supporting obligations of any of the foregoing;

(vi) all General Intangibles;

(vii) all investment property;

(viii) all furniture and fixtures;

(ix) all goods and all documents of title and receipts, whether negotiable or non-negotiable, including all goods covered by such documents;

(x) all commercial tort claims;

(xi) all books, records and computer records in any way relating to the above property;

(xii) any and all substitutions, renewals, improvements, replacements, additions and proceeds of (i) through (xi) above; and

(xiii) all of the proceeds and products, whether tangible or intangible, of any of the foregoing, including proceeds of insurance or commercial tort claims covering or relating to any or all of the foregoing, and any and all Accounts Receivable, books and records, chattel paper, deposit accounts, Equipment, General Intangibles, Inventory, investment property, negotiable collateral, supporting obligations, money, or other tangible or intangible property resulting from the sale, lease, license, exchange, collection, or other disposition of any of the foregoing, the proceeds of any award in condemnation with respect to any of the foregoing, any rebates or refunds, whether for

taxes or otherwise, and all proceeds of any such proceeds, or any portion thereof or interest therein, and the proceeds thereof, and all proceeds of any loss of, damage to, or destruction of the above, whether insured or not insured, and, to the extent not otherwise included, any indemnity, warranty, or guaranty payable by reason of loss or damage to, or otherwise with respect to any of the foregoing (the "Proceeds"). Without limiting the generality of the foregoing, the term "Proceeds" includes whatever is receivable or received when investment property or proceeds are sold, exchanged, collected, or otherwise disposed of, whether such disposition is voluntary or involuntary, and includes proceeds of any indemnity or guaranty payable to Borrower or the Lenders from time to time with respect to any of the investment property.

Notwithstanding the foregoing, in no event does the term Collateral include any Excluded Asset and no security interest is granted hereunder in any such Excluded Asset.

"Collateral Locations" shall mean the locations set forth on **Schedule 1.01-A**.

"Common Stock" shall mean shares of common stock, par value $0.0001 per share, of the Borrower.

"Documents" shall mean this Agreement, the Notes, the Warrants, the Blocked Account Agreement (if required by the terms hereof), the Patent Security Agreement between the parties hereto dated as of the date hereof (the "Patent Security Agreement") and all attachments, amendments, supplements, scheduled, exhibits and other items related to any such documents, and all other documents and/or items perfecting all security interests of the Lender stated herein and/or in the other Documents including, but not limited to, all U.C.C. Financing Statements and other documents filed with the United States Patent and Trademark Office and/or any other governmental agency and any other instruments or documents required or contemplated hereunder and/or by the other Documents, whether now existing or at any time hereafter arising.

"Environmental Laws" shall mean any and all laws, rules, orders, regulations, statutes, ordinances, guidelines, codes, decrees, or other legally enforceable requirements (including, without limitation, common law) of any international authority, foreign government, the United States, or any state, local, municipal or other governmental authority, regulating, relating to or imposing liability or standards of conduct concerning protection of the environment or of human health, or employee health and safety, as has been, is now, or may at any time hereafter be, in effect.

"Equipment" shall mean all machinery and equipment owned by Borrower, wherever located, whether now owned or hereafter existing or acquired by Borrower, any embedded software thereon, any additions thereon, accessions thereto or replacements of parts thereof.

"Excluded Assets" shall mean (a) any lease, license, General Intangible, contract or agreement to which the Borrower is a party, and any of its rights or interest thereunder, if and to the extent that the granting of a security interest is prohibited or restricted by or in violation of, or requires the consent of any Person that has not been obtained under (i) any law, rule or regulation applicable to the Borrower or such license, lease, General Intangible, contract or agreement, or (ii) a term, provision or condition of any such lease, license, contract or agreement; (b) any property, lease, license, General Intangible, contract or agreement subject to

Permitted Liens securing purchase money Indebtedness to the extent that a grant or perfection of a lien in favor of the Lenders on any such property is prohibited by or results in a breach or termination of, or constitutes a default under, the documentation governing such liens or the obligations secured by such liens to the extent enforceable under Section 9-406 of the UCC; (c) any Excluded Deposit Account (except for any proceeds of Accounts Receivable that should have been deposited in the Blocked Account); and (d) the Napo License Agreements and any other property of the Borrower which is subject to any Napo License Agreement and is expressly listed on **Schedule 1.01-B**; provided, however, that notwithstanding anything to the contrary provided herein or elsewhere no licenses, revenues, proceeds, receivables, accounts and/or Accounts Receivable of the Borrower resulting directly and/or indirectly from the Napo License Agreement shall be considered Excluded Assets and none of the Patents and/or other collateral set forth in the Patent Security Agreement shall be considered Excluded Assets including, but not limited to the Patents listed on **Schedule 1.01-E**.

"Excluded Deposit Account" means all Deposit Accounts used solely for the following purposes: (a) payroll, (b) benefits, (c) tax deposits and withholding obligations relating to payroll and employee benefit plans, and (d) provided such accounts do not in the aggregate hold more than $25,000, petty cash accounts.

"Existing Warrants" shall mean the five (5) year common stock purchase warrants of the Borrower issued to the Lenders on the Original Execution Date to purchase in the aggregate such number of shares of Common Stock equal to $2,000,000 divided by the per share exercise price set forth in the Existing Warrants.

"Event of Default" shall have the meaning set forth in Section 7 hereof.

"GAAP" shall mean generally accepted accounting principles in the United States of America as in effect from time to time.

"General Intangibles" shall mean all general intangibles (as such term is defined in the UCC) owned by Borrower, including, but not limited to payment intangibles, goodwill, software, trademarks, trade names, licenses, patents, patent applications, copyrights, inventions, franchises, books and records of Borrower, designs, trade secrets, registrations, prepaid expenses, all rights to and payments of refunds, overpayments, rebates and return of monies, including, but not limited to, sales tax refunds, tax refunds, tax refund claims and rights to and payments of refunds, overpayments or overfundings under any pension, retirement or profit sharing plans and any guarantee, security interests or other security held by or granted to Borrower to secure payment by an Account Debtor of any of the Accounts Receivable.

"Indebtedness" shall mean, with respect to any Person at any date, without duplication, (a) all indebtedness of such Person for borrowed money, (b) all obligations of such Person for the deferred purchase price of property or services, (c) all obligations of such Person evidenced by notes, bonds, debentures or other similar instruments, (d) all indebtedness created or arising under any conditional sale or other title retention agreement with respect to property acquired by such Person (even though the rights and remedies of the seller or lender under such agreement in the event of default are limited to repossession or sale of such property), (e) all capital lease obligations of such Person, (f) all obligations of such Person, contingent or otherwise, as an

account party or applicant under acceptance, letter of credit, surety bond or similar facilities, (g) all obligations of such Person, contingent or otherwise, to purchase, redeem, retire or otherwise acquire for value any capital stock of such Person, (h) all obligations for any earn-out consideration, (i) the liquidation value of mandatorily redeemable preferred capital stock of such Person, (j) all guarantee obligations of such Person in respect of obligations of the kind referred to in clauses (a) through (i) above, (k) all obligations of the kind referred to in clauses (a) through (j) above secured by (or for which the holder of such obligation has an existing right, contingent or otherwise, to be secured by) any lien on property (including, without limitation, accounts and contract rights) owned by such Person, whether or not such Person has assumed or become liable for the payment of such obligation and (l) all obligations of such Person in respect of hedge agreements, provided that, the obligations of Borrower pursuant to the Napo License Agreement shall be deemed to not be Indebtedness. Notwithstanding anything to the contrary, in no event will "Indebtedness" include any obligations of the Borrower with respect to any of its common stock, preferred stock or other equity interests. The Indebtedness of any Person shall include, without duplication, the Indebtedness of any other entity (including any partnership in which such Person is a general partner) to the extent such Person is liable therefor as a result of such Person's ownership interest in or other relationship with such entity, except to the extent the terms of such Indebtedness expressly provide that such Person is not liable therefor.

"Inventory" shall mean any and all goods, finished goods, whole goods, materials, raw materials, work-in-progress, components or supplies, wheresoever located and whether now owned or hereinafter acquired and owned by Borrower, including, without limitation, goods, finished goods, whole goods, materials, raw materials, work-in-process, components or supplies in transit, wheresoever located, whether now owned or hereafter acquired by Borrower, which are held for demonstration, illustration, sale or lease, furnished under any contract of service or held as raw materials, work-in-process for manufacturing or processing or supplies for manufacturing or processing, and all materials used or consumed in the business of Borrower, and shall include such other property, the sale or disposition of which has given rise to an Accounts Receivable and which has been returned to or repossessed or stopped in transit by or on behalf of Borrower. Notwithstanding anything to the contrary provided herein, for purposes of this Agreement, Inventory shall include Croton Lechleri latex and SB-300 owned by the Borrower, which inventory is located at Corovan, 901 16th Street, San Francisco, California 94017 and Indena S.p.A., Viale Ortles 12, 20139 Milano, Italia.

"IPO" means the closing of the sale of shares of Common Stock to the public in accordance with the Securities Act of 1933, which shares of Common Stock are registered for sale pursuant to a Registration Statement on Form S-1 or other applicable form.

"Liabilities" shall mean all liabilities, indebtedness and obligations of Borrower to the Lenders, howsoever created, arising or evidenced, whether now existing or hereafter arising, whether direct or indirect (including those acquired by assignment), absolute or contingent, due or to become due, primary or secondary, joint or several, whether existing or arising through discount, overdraft, purchase, direct loan, participation, operation of law, or otherwise, all liabilities, indebtedness and obligations of Borrower to the Lenders pursuant to any letter of credit, any standby letter of credit, or any of the Documents and reasonable outside attorneys' and paralegals' fees or charges relating to the preparation of the Documents and the enforcement of Lenders' rights, remedies, powers and security interests under this Agreement and the other

Documents, including, but not limited to, the drafting of any documents in the preparation and enforcement of the Loan and the Notes, excluding in all cases, all liabilities and obligations of Borrower under the Warrants.

"Loan" shall mean the $1,000,000 aggregate principal amount of the Notes purchased by the Lenders from the Borrower pursuant hereto.

"Loan Maturity Date" shall mean the earliest of (i) the date that is one hundred and eighty (180) days from the Closing Date, (ii) the consummation of a Major Transaction and (iii) the date that all Liabilities are accelerated in accordance with the terms hereof.

"Major Transaction" shall mean any of the following (i) the consolidation, merger or other business combination of Borrower with or into another Person (other than pursuant to a migratory merger effected solely for the purpose of changing the jurisdiction of incorporation of Borrower), (ii) the sale of all or substantially all of the Borrower's operating assets, (iii) the sale of 35% or more of the voting stock of the Borrower, (iii) [Reserved]; (iv) an IPO, (v) a Qualified Private Placement; (vi) if the Common Stock becomes eligible for quotation or is listed for trading on any trading medium; and/or (vii) if the Borrower either voluntarily files or is required by law to file periodic reports with the Securities and Exchange Commission (the "SEC").

"Material Adverse Effect" shall mean a material adverse effect on (a) the business, assets, property, operations, or condition (financial or otherwise) of Borrower, (b) the validity or enforceability of this Agreement or any of the other Documents or (c) the rights or remedies of the Lenders hereunder or thereunder.

"Napo License Agreements" shall mean each of the licensing agreements between the Borrower and NAPO Pharmaceuticals, Inc. set forth on **Schedule 1.01-B** hereto.

"Notes" shall mean the senior secured notes in the aggregate principal amount of $1,000,000 evidencing the Loan, each dated the Closing Date, which the Lenders will, subject to the terms and conditions of this Agreement, purchase for the $900,000 aggregate Purchase Price pursuant to this Agreement, which form of Notes are annexed hereto as **Exhibit I**; provided, however, that notwithstanding anything to the contrary provided herein or elsewhere, the Borrower shall have the right to amend the form of Notes following the date of this Agreement so that upon any sale of the Notes to the Lenders the Notes shall reflect such terms and conditions set forth herein to the extent the Lenders desire any such provisions included in the Notes in their sole discretion.

"OFAC" shall mean the United States Department of the Treasury's Office of Foreign Assets Control.

"OFAC Regulations" shall mean the regulations promulgated by OFAC, as amended from time to time.

"Original Execution Date" shall mean October 30, 2014.

"Patent(s)" means all patents and patent applications set forth on **Schedule 1.01-E** hereto, all licenses relating directly and/or indirectly to any of the foregoing and all income and royalties

with respect to any licenses, all rights to sue for past, present or future infringement thereof, all rights arising therefrom and pertaining thereto and all reissues, divisions, continuations, renewals, extensions and continuations-in-part thereof and all commercial tort claims arising out of any of the aforementioned patents;.

"Permitted Indebtedness" shall mean (i) the Loan; (ii) current accounts payable arising in the ordinary course of business and not more than ninety (90) days past their respective dates due; (iii) capital leases and purchase money indebtedness incurred in the ordinary course of business; (iv) no more than $100,000 of Subordinated Debt and (v) the Indebtedness set forth on **Schedule 1.01-C**, which shall not be increased, reborrowed, extended and/or otherwise amended, changed or supplemented and all such Indebtedness shall be unsecured.

"Permitted Liens" means any and all of the following: (i) liens in favor of any Lender; (ii) liens which are set forth on **Schedule 1.01-D**, all of which shall be expressly subordinate to all liens and security interests securing all Liabilities of the Borrower under this Agreement and the other Documents (other than the Warrants) to the Lenders; (iii) liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings; provided, that Borrower maintains adequate reserves therefor in accordance with GAAP; (iv) liens securing claims or demands of materialmen, artisans, mechanics, carriers, warehousemen, landlords and other like Persons arising in the ordinary course of Borrower's business and imposed without action of such parties; provided, that the payment thereof is not yet required; (v) liens arising from judgments, decrees or attachments in circumstances which do not constitute an Event of Default hereunder; (vi) the following deposits, to the extent made in the ordinary course of business: deposits under worker's compensation, unemployment insurance, social security and other similar laws, or to secure the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure indemnity, performance or other similar bonds for the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure statutory obligations (other than liens arising under ERISA or environmental liens) or surety or appeal bonds, or to secure indemnity, performance or other similar bonds; (vii) liens on Equipment or software or other intellectual property constituting purchase money Liens and liens in connection with capital leases securing Indebtedness permitted hereunder; (viii) liens incurred in connection with no more than $100,000 aggregate principal amount of Subordinated Indebtedness; provided, however, that no lien on any Subordinated Indebtedness shall be considered a Permitted Lien unless such Subordinated Indebtedness is subject to subordination terms reasonably satisfactory to the Lenders (including, without limitation, expressly stating that payment of such indebtedness is subordinated to payment of the Liabilities); (ix) leasehold interests in leases or subleases and licenses granted in the ordinary course of business and not interfering in any material respect with the business of the licensor; (x) liens in favor of customs and revenue authorities arising as a matter of law to secure payment of custom duties that are promptly paid on or before the date they become due; (xi) liens on insurance proceeds securing the payment of financed insurance premiums that are promptly paid on or before the date they become due (provided that such Liens extend only to such insurance proceeds and not to any other property or assets); (xii) statutory and common law rights of set-off and other similar rights as to deposits of cash and securities in favor of banks, other depository institutions and brokerage firms; (xiii) easements, zoning restrictions, rights-of-way and similar encumbrances on real property imposed by law or arising in the ordinary course of business so long as they do not materially impair the value or

marketability of the related property; and (xiv) liens incurred in connection with the extension, renewal or refinancing of the Permitted Indebtedness secured by liens of the type described in clauses (i) through (xi) above; provided, that any extension, renewal or replacement lien shall be limited to the property encumbered by the existing Lien and the principal amount of the Permitted Indebtedness being extended, renewed or refinanced (as may have been reduced by any payment thereon) does not increase.

"Person" shall mean any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, institution, entity, party or government (whether national, federal, state, county, city, municipal or otherwise including, without limitation, any instrumentality, division, agency, body or department thereof).

"Pro-Rata Percentage" means the percentage of the $900,000 Purchase Price paid by the particular Lender for the $1,000,000 aggregate principal amount of Notes. The dollar amount of the Purchase Price paid by each Lender, the aggregate principal amount of each Note purchased by each Lender and the percentage of the Purchase Price paid by each Lender will be as set forth on **Exhibit II** hereto.

"Purchase Price" means the $900,000 aggregate purchase price to be paid by the Lenders to purchase the $1,000,000 aggregate principal amount of Notes.

"Qualified Private Placement" means the sale by the Borrower of its securities after the Closing Date (and excluding any non-debt convertible securities outstanding prior to the Closing Date and thereafter exercised or converted after the Closing Date) in one offering or a series of related offerings exempt from the registration requirements of the federal securities laws resulting in the receipt by the Borrower of no less than $4,000,000 of gross proceeds, which also shall include all gross loan proceeds other than the proceeds of the Loan and the proceeds of Permitted Indebtedness.

"Solvent" shall mean, with respect to any Person, as of any date of determination, (a) the amount of the "present fair saleable value" of the assets of such Person will, as of such date, exceed the amount of all "liabilities of such Person, contingent or otherwise", as of such date, as such quoted terms are determined in accordance with applicable federal and state laws governing determinations of the insolvency of debtors, (b) the present fair saleable value of the assets of such Person will, as of such date, be greater than the amount that will be required to pay the liability of such Person on its debts as such debts become absolute and matured, (c) such Person will not have, as of such date, an unreasonably small amount of capital with which to conduct its business, and (d) such Person will be able to pay its debts as they mature. For purposes of this definition, (i) "debt" means liability on a "claim", and (ii) "claim" means any (x) right to payment, whether or not such a right is reduced to judgment, liquidated, unliquidated, fixed, contingent, matured, unmatured, disputed, undisputed, legal, equitable, secured or unsecured or (y) right to an equitable remedy for breach of performance if such breach gives rise to a right to payment, whether or not such right to an equitable remedy is reduced to judgment, fixed, contingent, matured or unmatured, disputed, undisputed, secured or unsecured.

"Subordinated Debt" shall mean Indebtedness due and owing by Borrower to any Person (whether such Indebtedness shall be now existing or hereinafter arising) which is permitted to

exist pursuant to this Agreement and is expressly subordinated to the Liabilities pursuant to a Subordination Agreement in form and substance satisfactory to Lenders.

"Subordination Agreement" shall mean each agreement given to the Lenders from time to time by any Person with respect to the Subordinated Debt, all in the form and substance reasonably satisfactory to the Lenders.

"Subsidiary" shall mean, with respect to any Person, a corporation, partnership, limited liability company or other entity of which shares of stock or other ownership interests having ordinary voting power (other than stock or such other ownership interests having such power only by reason of the happening of a contingency) to elect a majority of the board of directors or other managers of such corporation, partnership or other entity are at the time owned, or the management of which is otherwise controlled, directly or indirectly through one or more intermediaries, or both, by such Person.

"UCC" shall mean the Uniform Commercial Code as in effect from time to time in the State of New York; provided, however, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, priority, or remedies with respect to the Lenders' liens on any Collateral is governed by the Uniform Commercial Code as enacted and in effect in a jurisdiction other than the State of New York, the term "UCC" shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies.

"Warrants" shall mean the five (5) year common stock purchase warrants of the Borrower to be issued to the Lenders on the Closing Date to purchase in the aggregate such number of shares of Common Stock equal to $1,000,000 divided by the per share exercise price set forth in the Warrants (each a "Warrant Share," and, collectively, the "Aggregate Warrant Shares"). The Warrants shall be in the form annexed hereto as **Exhibit III**, which Warrants shall be issued to each Lender on the Closing Date. The Warrant issued to each Lender, shall entitle each Lender to exercise such Warrant into such number of shares of Common Stock equal to the product of (i) the Aggregate Warrant Shares, multiplied by (ii) such Lender's Pro-Rata Percentage of the Loan.

Section 1.02. Other Definitional Provisions.

(a) Use of Defined Terms. Unless otherwise specified therein, all terms defined in this Agreement shall have the defined meanings when used in the other Documents or any certificate or other document made or delivered pursuant hereto or thereto.

(b) Accounting Terms. As used herein and in the other Documents, and any certificate or other document made or delivered pursuant hereto or thereto, accounting terms relating to Borrower not defined in Section 1.01 and accounting terms partly defined in Section 1.01, to the extent not defined, shall have the respective meanings given to them under GAAP (provided that all terms of an accounting or financial nature used herein shall be construed, and all computations of amounts referred to herein shall be made without giving effect to (i) any election under Accounting Standards Codification 825-10-25 (previously referred to as Statement of Financial Accounting Standards 159) (or any other Accounting Standards

Codification or Financial Accounting Standard having a similar result or effect) to value any Indebtedness or other liabilities of Borrower at "fair value", as defined therein, and (ii) any treatment of Indebtedness in respect of convertible debt instruments under Accounting Standards Codification 470-20 (or any other Accounting Standards Codification or Financial Accounting Standard having a similar result or effect) to value any such Indebtedness in a reduced or bifurcated manner as described therein, and such Indebtedness shall at all times be valued at the full stated principal amount thereof).

(c) Construction. The words "hereof", "herein" and "hereunder" and words of similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement, and Section, Schedule and Exhibit references are to this Agreement unless otherwise specified. The meanings given to terms defined herein shall be equally applicable to both the singular and plural forms of such terms.

(d) UCC Terms. Terms used in this Agreement which are defined in the UCC shall, unless the context indicates otherwise or are otherwise defined in this Agreement, have the meanings provided for by the UCC.

ARTICLE 2.
LOAN

Section 2.1. Conditions to the Loan; Use of Net Proceeds of the Loan. Subject to the terms and conditions of this Agreement, the Lenders will on December 2, 2014 effectuate the Loan by purchasing the $1,000,000 aggregate principal amount of Notes for the $900,000 Purchase Price, provided that (i) no Event of Default or event that with the passage of time or the giving of notice, or both, would become an Event of Default shall have occurred and be continuing or would result therefrom; and (ii) the conditions in Section 6.01 have been satisfied as of such date. The net proceeds of the Loan shall be used by Borrower solely for general corporate purposes.

Section 2.2. Notes and Warrants. The Loan shall be evidenced by the $1,000,000 aggregate principal amount Notes, each of which shall be issued to the Lenders as a condition to the closing on the Closing Date of the transaction contemplated to occur herein and in the other Documents on the Closing Date. The Warrants will be issued to the Lenders on the Closing Date.

Section 2.3. Purchase Price and Payment of the Purchase Price for the Notes. The Purchase Price for the $1,000,000 aggregate principal amount of Notes shall be $900,000 in the aggregate, representing an original issue discount. Subject to the terms and conditions of this Agreement, on December 3, 2014 the Lenders shall pay their Pro Rata Percentage of the Purchase Price for the Notes by wire transfer of immediately available funds to the Borrower in accordance with the Borrower's written wiring instructions, against delivery of duly executed $1,000,000 aggregate principal amount of Notes. The failure of any Lender to fund its Pro Rata Percentage of Purchase Price for the Notes shall not relieve any other Lender from its obligation to fund its Pro Rata Percentage of Purchase Price for the Notes. In the event a Lender does not fund all or a portion of its Pro Rata Percentage of the Purchase Price (the "Non-Funding Lender"), the other Lender shall have the right, but not the obligation, to fund all or such portion of the Non-Funding Lender's Pro Rata Percentage of the Loan that such Non-Funding Lender

did not fund, and upon funding such amount, the Warrant issued (or the right to the Warrant if not issued) to such Non-Funding Lender will be deemed automatically cancelled and the Borrower shall cancel such Warrant and all rights thereto on its books and records, and issue to the funding Lender within five (5) Business Days the Non-Funding Lender's Warrant and such Non-Funding Lender will have no further rights under such Warrant.

Section 2.4. Interest Payment Amounts, Etc. In the event the Notes are purchased by the Lenders pursuant to this Agreement, upon the Loan Maturity Date, the Borrower shall pay to each Lender, in addition to such Lender's Pro Rata Percentage of the $1,000,000 aggregate principal amount of the Notes and all other amounts due hereunder and under the other Documents (other than the Warrants), an amount equal to the product of (i) such Lender's Pro Rata Percentage, multiplied by (ii) the Interest Payment Amount set forth in the below chart opposite the period during which the Loan Maturity Date occurs (each a "Lender's Interest Payment Amount").

	Period During which the Loan Maturity Date Occurs	Percentage Interest Rate (the "Percentage Interest Rate")	Interest Payment Amount (the "Interest Payment Amount")
1.	Commencing on the Closing Date thru and including the date 30 Days following the Closing Date	6%	$ 60,000
2.	Commencing on the date 31 days following the Closing Date to 180 days following the Closing Date	12%	$ 120,000

Each Lender's Interest Payment Amount shall be paid in cash by the wire transfer of immediately available funds to such Lender on the Loan Maturity Date pursuant to wire instructions provided by each Lender to the Borrower.

Section 2.5. Retroactive Increase in Interest Payment Amount. In the event any payment required to be paid to a Lender pursuant to this Agreement and/or any other Documents (other than the Warrants) is not paid when due, the Interest Payment Amount shall be increased by retroactively increasing the Percentage Interest Rate by one (1%) percent and thereafter the increased Percentage Interest Rate shall be further increased by one (1%) percent retroactively for each subsequent 30 day period (or partial period), during which any amounts due to one or more of the Lenders are not paid until all amounts due to the Lenders are paid in full.

Section 2.6. Payment and Prepayment of Loan.

(a) Optional Prepayments. Prior to the Loan Maturity Date, Borrower may prepay all (but not less than all) of the $1,000,000 aggregate principal amount of the Notes (an "Optional Prepayment"), in an amount (the "Optional Prepayment Amount"), as follows:

Period During which Optional Prepayment Occurs	Aggregate Optional Prepayment Amount to be Paid
Closing Date until the date 30 Days following the Closing Date	The sum of the (i) $1,000,000 aggregate principal amount of Notes; (ii) Interest Payment Amount and (iii) all other amounts due to Lenders under this Agreement and the other Documents (other than the Warrants) (collectively the "Base Amount")
Day 31 from the Closing Date until the date 60 days following the Closing Date	110% multiplied by the Base Amount
Day 61 from the Closing Date until the date 90 days following the Closing Date	112% multiplied by the Base Amount
Day 91 from the Closing Date until the date 120 days following the Closing Date	114% multiplied by the Base Amount
Day 121 from the Closing Date until the date 150 days following the Closing Date	116% multiplied by the Base Amount
Day 151 from the Closing Date until the date 180 days following the Closing Date	118% multiplied by the Base Amount

The dollar amount of the Optional Prepayment Amount to be paid to each Lender shall equal the product of (i) such Lender's Pro Rata Percentage, multiplied by (ii) the Optional Prepayment Amount. If the Borrower elects to effectuate an Optional Prepayment, it shall send to each Lender a written notice (the "Prepayment Notice"), providing the exact date the Optional Prepayment Amount shall be paid (which in no event shall be later than five (5) Business Days from the date the Prepayment Notice is sent by the Borrower to each of the Lenders as provided elsewhere herein (the "Prepayment Date")), and a break-down of the Optional Prepayment Amount to be paid to each Lender. Each Lender's pro rata portion of the Optional Prepayment Amount shall be paid to such Lender in cash by the Borrower wiring to each such Lender in immediately available funds each Lender's pro rata portion of the Optional Prepayment Amount pursuant to wire instructions provided by each Lender to the Borrower. If the $1,000,000 aggregate principal amount of Notes are repaid by the Borrower to the Lenders none of the aggregate principal amount of the Notes may be reborrowed.

(b) Payments on the Loan Maturity Date. If the Notes have been purchased by the Lenders hereunder, then on the Loan Maturity Date, the Borrower shall pay to each Lender the

product of (i) such Lender's Pro Rata Percentage, multiplied by (ii) 118% multiplied by the Loan Maturity Date Payment Amount. The "Loan Maturity Date Payment Amount" shall equal the sum of the $1,000,000 aggregate principal amount of Notes, the Interest Payment Amount and all other unpaid amounts owed to the Lenders under this Agreement and the other Documents (other than the Warrants). The Borrower shall pay to each Lender such Lender's Loan Maturity Date Payment Amount in cash by the Borrower wiring to the Lenders in immediately available funds such Lender's Loan Maturity Date Payment Amount pursuant to wiring instructions provided by each Lender to the Borrower.

Section 2.7. [Reserved].

Section 2.8. Brokerage Fee. The Borrower paid to Aegis Capital Corp ("Aegis"), a non-refundable fee of $54,000 on the Original Execution Date. All fees to Aegis have been paid in full and no other fees are owed by Borrower to Aegis.

Section 2.9. Lenders Cost and Expenses. All reasonable and documented costs and expenses related to the negotiation, preparation, and other items regarding the Documents, including, but not limited to legal fees payable to the Lenders' legal counsel subject to the limitations set forth in Section 9.4 (plus any documented out-of-pocket expenses, including, but not limited to, filing fees and expenses relating to securing the Collateral), shall be paid to the Lenders upon execution of this Agreement by the Borrower, regardless of whether the Lenders purchase the Notes.

Section 2.10. Existing Warrants. Upon execution of this Agreement the Existing Warrants shall be deemed cancelled and of no further force and effect and the Lenders will promptly (but in no event later than the first Business Day following the Closing Date), return to the Borrower the originals thereof for cancellation.

ARTICLE 3.
COLLATERAL

Section 3.01. Security Interests. To secure payment of the Liabilities, Borrower as a condition to and effective solely upon the sale of the Notes to the Lenders, hereby irrevocably pledges, assigns, transfers, conveys and sets over to the Lenders and hereby grants to the Lenders a first priority security interest in and to the Collateral, howsoever arising, wherever located and whether now owned or existing or hereafter existing or acquired.

Section 3.02. Perfection Authorization and Filing Requirements. As a condition to and solely upon and following the sale of the Notes to the Lenders, Borrower shall perform any and all acts requested by the Lenders to establish, maintain and continue the Lenders' security interest and liens in the Collateral, including but not limited to, executing or authenticating financing statements and such other instruments and documents when and as reasonably requested by the Lenders. Borrower hereby authorizes Lenders through any of the Lenders' employees, agents or attorneys, such authorization effective solely upon the sale of the Notes to the Lenders, to file any and all financing statements and/or similar documents and/or instruments, including, without limitation, any continuations, transfers and/or amendments

thereof required to perfect the Lenders' security interest and liens in the Collateral under the UCC and/or otherwise without authentication or execution by Borrower.

Section 3.03. Collection of Accounts Receivable.

(a) Blocked Account. In the event the Notes are outstanding on the date 90 days following the Closing Date (the "Trigger Date"), Borrower shall (i) promptly (but in no event later than three (3) Business Days following the Trigger Date), instruct its customers (and all future customers upon such customers becoming customers of the Borrower), to deliver all remittances upon Accounts Receivables (whether paid by check or by wire transfer of funds) to a "blocked account" (the "Blocked Account"), established at a bank (the "Blocked Account Bank"), and (ii) have established the Block Account pursuant to a blocked account agreement by and among, the Blocked Account Bank, the Borrower, the Lenders and any other party the Lenders shall so reasonably request (the "Blocked Account Agreement"), which Blocked Account Agreement shall be in such form and have such terms as the Lenders shall so reasonably agree, that is sufficient to give Lenders (or one Lender acting as agent for all Lenders) "control" (for purposes of Articles 8 and 9 of the UCC) over such Blocked Account. All funds deposited in such Blocked Account shall immediately become subject to the security interest of Lenders (and Borrower shall use its commercially reasonable efforts to obtain the agreement by such Blocked Account Bank to waive any offset rights against the funds to deposited), but until the occurrence and continuation of an Event of Default shall be available to Borrower. Borrower shall have no obligation to take any action to create or perfect a security interest in any deposit account of Borrower until the Trigger Date.

(b) Contact by the Lenders. The Lenders acting jointly, unless one Lender authorizes the other Lender to act for such Lender, at any time after the occurrence and continuation of an Event of Default, may, in its sole discretion, notify any or all of the Account Debtors that (1) the Accounts Receivable have been assigned to the Lenders; and/or (2) that all further payments on the Accounts Receivable should be paid directly to one of the Lenders acting as agent for all Lenders (the "Collecting Agent"), which Lender shall be selected by the Lenders. When requested by the Lenders after the occurrence of an Event of Default, Borrower at its expense will notify or cause to be notified any or all Account Debtors to pay directly to such Collecting Agent any sum or sums then due or to become due on the Accounts Receivable or any part thereof and all bills and statements thereafter sent by Borrower to such Account Debtors shall state that the same have been assigned to the Lenders and are payable solely to the Collecting Agent on behalf of the Lenders.

(c) Rights of Lenders after Event of Default. In the event an Account Debtor is notified under Section 3.01(b) that one or more Events of Default have occurred under the terms of this Agreement and/or the Notes, the Lenders shall have and succeed to all rights, remedies, securities and liens of Borrower in respect to such Accounts Receivable or other Collateral, including, but not limited to, the right of stoppage in transit of any merchandise, guarantees or other contracts or suretyship with respect to any such merchandise, warranties, unpaid seller's liens, statutory liens, artisans' liens, or the right to other collateral security held by or to which Borrower is entitled for the payment of any such merchandise, and shall have the right to enforce the same in its name or to direct the enforcement thereof by Borrower for the benefit of the Lender, and Borrower shall, at the request of the Lenders, deliver to the Lenders a separate

written assignment of any of the same. The Lenders, however, shall not incur any obligation or liability of Borrower to any Account Debtor, including, but not limited to, obligations or liabilities pursuant to any contract, agreement, warranty, guarantee, judicial decree or jury award. The Lenders, in such an event, are also hereby irrevocably authorized, so long as they act jointly (unless one Lender authorizes the other Lender to act on its behalf), to receive, open and dispose of all mail addressed to Borrower, to notify the Post Office authorities to change the address for delivery of Borrower's mail to an address designated by the Lenders, to endorse Borrower's name on all notes, checks, drafts, bills of exchange, money orders, commercial paper of any kind whatsoever, and any other instruments or documents received howsoever in payment of the Accounts Receivable, or any part thereof, and the Lenders or any officer or employee thereof are hereby irrevocably constituted and appointed agent and attorney-in-fact for Borrower for the foregoing purpose.

(d) Compromise of Accounts Receivable. Borrower shall not collect, compromise or accept any sum in full payment or satisfaction of any of the Accounts Receivable for materially less than the amount due without the express written consent of the Lenders, except in the ordinary course of business.

(e) Verification of Accounts Receivable. The Lenders, acting jointly (unless one Lender authorizes the other Lender to act on its behalf), may directly contact the Account Debtors for written confirmations of the Accounts Receivable at any time whether before or after the occurrence of an Event of Default.

Section 3.04. Use of Collateral. Borrower shall at all times keep the Collateral (including, but not limited to, the Inventory), in good condition and repair (ordinary wear and tear and casualty excepted) and free and clear of all unpaid charges (including, but not limited to, taxes), liens and encumbrances except for Permitted Liens, and shall pay or cause to be paid all material obligations as they come due, including but not limited to, mortgage payments, real estate taxes, assessments and rent due on the premises where the Collateral is or may be located, except for obligations being contested in good faith by Borrower and for which adequate reserves in conformity with GAAP have been established. Borrower agrees that (except as provided in the immediately preceding sentence) in the event Borrower fails to pay such obligations, the Lenders, acting jointly (unless one Lender authorizes the other Lender to act on its behalf), may, at their sole and arbitrary discretion, pay such obligations for the account of Borrower. The Lenders, acting jointly, may, in their sole discretion, discharge taxes, liens or security interests or other encumbrances at any time levied or placed on the Collateral and may, in its sole and arbitrary discretion, pay for the maintenance and preservation of the Collateral. Any payments made by the Lenders pursuant to this Section 3.04 shall be repayable to the Lenders by Borrower immediately upon the Lenders' demand therefor, with interest at a rate equal to the highest interest rate described herein from time to time during the period from and including the date funds are so expended by the Lenders to the date of repayment, and any such amounts due and owing the Lenders shall be an additional obligation of Borrower to the Lenders secured hereunder.

Section 3.05. Third Party Waivers. At the Lenders' request, Borrower shall use commercially reasonable efforts to deliver to the Lenders, the Borrower's landlord waivers, bailee waivers, warehouse waivers or other third party waivers required by Lenders

(individually, a "Third Party Waiver") executed by the lessors, mortgagors, bailors, warehouse owners and/or operators and consignors of or at the Collateral Locations used by Borrower, all in form and substance reasonably satisfactory to the Lenders. The forms of the Third Party Waivers delivered by Borrower to Lender as of the Closing Date are satisfactory to the Lenders.

Section 3.06. Delivery of Instruments and Chattel Paper. If any amount payable under or in connection with any of the Collateral shall be or become evidenced by any instrument, certificated security or chattel paper, such instrument, certificated security or chattel paper shall be immediately delivered to the Lenders, duly indorsed in a manner satisfactory to the Lenders, to be held as Collateral pursuant to this Agreement; provided that Borrower shall not be obligated to deliver to the Lenders any instruments or chattel paper held by Borrower at any time to the extent that the aggregate face amount of all such instruments and chattel paper held by Borrower at such time does not exceed $100,000.

Section 3.07. Payment of Obligations. Borrower shall pay and discharge or otherwise satisfy at or before maturity or before they become delinquent, as the case may be, all taxes, assessments and governmental charges or levies imposed upon the Collateral or in respect of income or profits therefrom, as well as all claims of any kind (including, without limitation, claims for labor, materials and supplies) against or with respect to the Collateral, except that no such charge need be paid if the amount or validity thereof is currently being contested in good faith by appropriate proceedings, reserves in conformity with GAAP with respect thereto have been provided on the books of Borrower and such proceedings could not reasonably be expected to result in the sale, forfeiture or loss of any material portion of the Collateral or any interest therein.

Section 3.08. [Reserved.]

Section 3.09. Commercial Tort Claims. If Borrower shall at any time commence a suit, action or proceeding with respect to any commercial tort claim held by it with a value which Borrower reasonably believes to be of $100,000 or more, Borrower shall promptly notify the Lenders thereof in a writing signed by Borrower and describing the details thereof and shall grant to the Lenders in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance satisfactory to the Lenders.

ARTICLE 4.
REPRESENTATIONS AND WARRANTIES

Section 4.01. Representation and Warranties. Borrower represents and warrants to each Lender that, as of the Closing Date:

(a) Organization, Etc. Borrower is duly organized, validly existing and in good standing under the laws of the state of its organization and is duly qualified and in good standing or has applied for qualification as a foreign corporation authorized to do business in each jurisdiction where, because of the nature of its activities or properties, such qualification is required except where the failure to be so qualified would not reasonably be expected to have a Material Adverse Effect.

(b) Authorization: No Conflict. The execution, delivery and performance of the Documents to which Borrower is a party, the borrowing hereunder and the use of the proceeds thereof (i) are within Borrower's corporate powers, (ii) have been duly authorized by all necessary action by or on behalf of Borrower, (iii) have, or by the time of their execution and delivery shall have, received all necessary governmental or regulatory approval (if any shall be required), (iv) do not and shall not contravene or conflict with any provision of, or require any consents under (1) any law, rule, regulation or ordinance, (2) Borrower's

organizational documents; or (3) any agreement binding upon Borrower or any of Borrower's properties except as would not reasonably be expected to have a Material Adverse Effect, and (v) do not result in, or require, the creation or imposition of any lien on any of Borrower's properties or revenues pursuant to any law, rule, regulation or ordinance or any such agreement (other than the liens created by the Documents).

(c) Validity and Binding Nature. The Documents to which Borrower is a party are the legal, valid and binding obligations of Borrower, enforceable against Borrower in accordance with their respective terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization and other similar laws of general application affecting the rights and remedies of creditors and by general equitable principles (whether enforcement is sought by proceedings in equity or at law).

(d) Title to Assets. Borrower has good and marketable title to all assets owned by Borrower, including, but not limited to, the Collateral (including but not limited to the Inventory), subject to no (i) liens, encumbrances, security interests, or mortgages, except for Permitted Liens; (ii) zoning, building, fire, health or environmental code violations of any governmental authority; and (iii) violations of any covenants, conditions or restrictions of record. Borrower has obtained all required permits, certificates, licenses, approvals and other authorizations from governmental agencies and entities (whether federal, state or local) necessary to carry on its respective operations.

(e) Financial Statements. The financial statements of Borrower included in Amendment No. 4 to Borrower's S-1 Registration Statement have been prepared on a basis and in conformity with GAAP (subject, in the case of interim financial statements, to year-end adjustments and the absence of footnote disclosures) consistently applied, and fairly present in all material respects the consolidated financial condition of Borrower as at the dates of such financial statements and the results of operations of Borrower for the periods then ended, and since the date thereof through and including the Closing Date there has been no material adverse change in the financial condition or operations of Borrower.

(f) Litigation and Contingent Liabilities. No litigation or arbitration, administrative or governmental proceedings are pending or threatened against Borrower which could reasonably be expect to have a Material Adverse Effect.

(g) No Violations of Laws. Borrower is not in material violation of any law, ordinance, rule, regulation, judgment, decree or order of any federal, state or local governmental body or court.

(h) Burdensome Obligations. Except as set forth on Schedule 4.01(h), Borrower is not a party to any indenture, agreement, lease, contract, deed or other instrument, or subject to any partnership restrictions or has any knowledge of anything which could have a Material Adverse Effect.

(i) Taxes. All federal, and material state and local tax returns required to be filed by Borrower have been filed with the appropriate governmental agencies and all taxes due and payable by Borrower have been timely paid.

(j) Employee Benefit Plans. Borrower has no Plan. The term "Plan" shall mean an "employee pension benefit plan" (as defined in Section 3 of ERISA) which is or has been established or maintained, or to which contributions are or have been made, by Borrower or by any member of the Controlled Group. Each employee benefit plan, if any, (as defined in Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended from time to time) maintained by Borrower complies in all material respects with all applicable requirements of law and regulations and all payments and contributions required to be made with respect to such plans have been timely made.

(k) Federal Laws and Regulations. Borrower is not (i) an "investment company" or a company "controlled", whether directly or indirectly, by an "investment company", within the meaning of the Investment Company Act of 1940, as amended; or (ii) engaged principally, or as one of its important activities, in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulation U of the Board of Governors of the Federal Reserve System).

(l) Fiscal Year. The fiscal year of Borrower ends on December 31 of each year.

(m) Subsidiaries; Locations; Security Rights. Borrower does not have any Subsidiaries and on the Closing Date will not have any Subsidiaries. Schedule 4.01(m) sets forth as of the date hereof all outstanding securities of the Borrower the terms of which are as set forth in the S-1 Registration Statement. All securities of the Borrower issued and outstanding were duly and validly issued, no person has any rescission rights with respect to any securities of the Borrower sold to any such person and all securities issued by the Borrower were issued in accordance with all federal and state securities laws. Schedule 4.01(m) sets forth, as of the date hereof, Borrower's jurisdiction of organization, identification number from the jurisdiction of organization (if any), and the location of Borrower's chief executive office or sole place of business or principal residence, as the case may be. Except as set forth on Schedule 4.01(m), there are no outstanding subscriptions, options, warrants, calls, preemptive or registration rights or other agreements or commitments of any nature relating to any capital stock of Borrower. Except as set forth on Schedule 4.01(m), there are no contracts, commitments, understandings, or arrangements by which Borrower is or may become bound to issue additional capital stock or options, securities or rights convertible into capital stock. Except as set forth on Schedule 4.01(m), Borrower is not party to or bound by any agreement or understanding granting registration or anti-dilution rights to any Person with respect to any of its equity or debt securities. Except as set forth on Schedule 4.01(m), Borrower is not a party to, and it has no knowledge of, any agreement or understanding restricting the voting or transfer of any of its capital stock.

(n) Officers and Ownership. As of the date hereof, the Persons set forth on Schedule 4.01(n) (i) holds the respective office or offices, position or positions in Borrower and (ii) own the percentage of each and every class of issued and outstanding capital stock or other ownership interests of Borrower and the voting power over said capital stock or other ownership interests.

(o) Genuineness of Accounts Receivable. All the Accounts Receivable of Borrower are genuine and were incurred in the ordinary course of business and are not in default. Each of the Accounts Receivables shall be a bona fide and valid account representing a bona fide indebtedness incurred by the customer therein named, for a fixed sum as set forth in the invoice relating thereto with respect to an absolute sale or lease and delivery of goods upon stated terms of Borrower. Same shall be due and owing in accordance with Borrower's standard terms of sale without dispute, setoff or counterclaim. Each customer of Borrower, to the best of Borrower's knowledge, as of the date each Account Receivable is created, is and will be solvent and able to pay all Accounts Receivables on which the customer is obligated in full when due. With respect to such customers of Borrower who are not solvent, Borrower has set up on its books and in its financial records bad debt reserves adequate to cover such Account Receivables.

(p) Collateral Locations. All of the tangible Collateral (other than assets in transit, out for repair or in the possession of employees) located at the Collateral Locations. All of the Inventory consisting of Lechleri latex and SB-300 is located at Corovan, 901 16th Street, San Francisco, California 94017 and Indena S.p.A., Viale Ortles 12, 20139 Milano, Italia.

(q) [Reserved].

(r) Rule 506(d) Bad Actor Disqualification Representations and Covenants.

(i) No Disqualification Events. Neither the Borrower, nor any of its predecessors, affiliates, any manager, executive officer, other officer of the Borrower participating in the offering, any beneficial owner (as that term is defined in Rule 13d-3 under the Exchange Act) of 20% or more of the Borrower's outstanding voting equity securities, calculated on the basis of voting power, nor any promoter (as that term is defined in Rule 405 under the Securities Act) connected with the Borrower in any capacity as of the date of this Agreement and on the Closing Date (each, a "Company Covered Person" and, together, "Company Covered Persons") is subject to any of the "Bad Actor" disqualifications described in Rule 506(d)(1)(i) to (viii) under the Securities Act (a "Disqualification Event"), except for a Disqualification Event covered by Rule 506(d)(2) or (d)(3). The Borrower has exercised reasonable care to determine (i) the identity of each person that is a Company Covered Person; and (ii) whether any Company Covered Person is subject to a Disqualification Event. The Borrower will comply with its disclosure obligations under Rule 506(e).

(ii) Other Covered Persons. The Borrower is not aware of any person (other than any Company Covered Person) that has been or will be paid (directly or indirectly) remuneration in connection with the Loan or the Warrants that is subject to a Disqualification Event (each an "Other Covered Person").

(iii) Reasonable Notification Procedures. With respect to each Company Covered Person, the Borrower has established procedures reasonably designed to ensure that the Borrower receives notice from each such Company Covered Person of (i) any Disqualification Event relating to that Company Covered Person, and (ii) any event that would, with the passage of time, become a Disqualification Event relating to that Company Covered Person; in each case occurring up to and including the Closing Date.

(iv) Notice of Disqualification Events. The Borrower will notify the Lenders immediately in writing upon becoming aware of (i) any Disqualification Event relating to any Company Covered Person and (ii) any event that would, with the passage of time, become a Disqualification Event relating to any Company Covered Person and/or Other Covered Person.

(s) [Reserved].

(t) Accuracy of Information, etc. No statement or information contained in this Agreement, any other Document or any other document, certificate or statement furnished to the Lenders by or on behalf of Borrower in writing for use in connection with the transactions contemplated by this Agreement or the other Documents, contained as of the date such statement, information, document or certificate was made or furnished, as the case may be, any untrue statement of a material fact or omitted to state a material fact necessary to make the statements contained herein or therein, taken as a whole, not materially misleading. There is no fact known to Borrower that could have a Material Adverse Effect that has not been expressly disclosed herein, in the other Documents, or in any other documents, certificates and statements furnished to the Lenders for use in connection with the transactions contemplated hereby and by the other Documents.

(u) Security Documents. Section 3.01 is effective to create in favor of each Lender a legal, valid and enforceable security interest in the Collateral and proceeds thereof. When financing statements in appropriate form are filed in the offices specified on Schedule 4.01(u) (which financing statements will be duly completed and delivered by the Borrower to the Lenders) and such other filings as are specified on Schedule 4.01(u) have been completed, the Lenders' lien on, and security interest in, all right, title and interest of Borrower in such Collateral and the proceeds thereof, as security for the Liabilities, will be perfected, in each case prior and superior in right to any other Person (other than any other Lender), to the extent such security interest can be perfected by the filing of such financing statements and other filings.

(v) Solvency. Borrower is, and after giving effect to the incurrence of all Indebtedness and obligations being incurred in connection herewith will be and will continue to be, Solvent.

(w) Affiliate Transactions. Other than as disclosed in Schedule 4.01(w) hereto, Borrower has not purchased, acquired or leased any property from, or sold, transferred or leased any property to, or entered into any other transaction with (i) any Affiliate, (ii) any officer, director, manager, shareholder or member of Borrower or any Affiliate of any thereof, or (iii) any member of the immediate family of any of the foregoing, except on terms comparable to the

terms which would prevail in an arms-length transaction between unaffiliated third parties and have been disclosed to Lenders in writing.

(x) Deposit Accounts. All deposit accounts, checking accounts, securities accounts and investment accounts of Borrower are set forth on Schedule 4.01(x).

(y) Intellectual Property. Borrower owns, or possesses the rights to use, all trademarks, service marks, trade names, domain names, patents, copyrights and websites (or copyrightable derivative works thereof), and intellectual property rights relating thereto (to any of the foregoing list, whether or not registered), licenses and authorizations which are necessary for the conduct of its business as now conducted without infringement or any conflict with the rights of others, and such trademarks, service marks, trade names, domain names, patents, copyrights and websites (or copyrightable derivative works thereof), and intellectual property rights relating thereto (to any of the foregoing list, whether or not registered), licenses and authorizations are set forth on Schedule 4.01(y) (other than off-the-shelf shrinkwrap software).

(z) [Reserved].

(aa) USA Patriot Act. To the extent applicable, Borrower is in compliance, in all material respects, with (a) the Trading with the Enemy Act, as amended, and each of the foreign assets control regulations of the United States Treasury Department (31 C.F.R., Subtitle B, Chapter V, as amended) and any other enabling legislation or executive order relating thereto, and (b) the USA Patriot Act (Title III of Pub. L. 107-56, signed into law October 26, 2001) (the "Act"). No

part of the proceeds of the Loan will be used, directly or indirectly, for any payments to any governmental official or employee, political party, official of a political party, candidate for political office, or anyone else acting in an official capacity, in order to obtain, retain or direct business or obtain any improper advantage, in violation of the United States Foreign Corrupt Practices Act of 1977, as amended.

(bb) Foreign Asset Control Laws. Borrower is not a Person named on a list published by OFAC or a Person with whom dealings are prohibited under any OFAC Regulations.

(cc) Registration Statement. The Registration Statement on Form S-1 of the Borrower originally filed with the SEC on August 27, 2014 and all amendments thereto, whether pre-effective or post-effective (collectively, with the prospectus' forming a part thereof, the "S-1 Registration Statement") does not and will not contain any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading.

(dd) Excluded Assets. The Borrower does not have any Excluded Assets of the type described in clauses (a), (b), (c) or (d), except for those in Section (d) of the definition of Excluded Asset herein which are expressly listed in Schedule 1.01-B thereof.

(ee) Indebtedness; Liens, Etc. The Borrower has no Indebtedness (except Permitted Indebtedness), and has no liens (except Permitted Liens).

(ff) Notes; Warrants, Etc. The Notes, the Warrants and all Warrant Shares (the "Securities"), have been duly and validly issued, are free from all pre-emptive and any rights of

first refusal, and when issued the Warrant Shares shall be duly authorized validly issued and fully paid for and free from all liens, encumbrances and other clouds on title. The issuance of the Securities is exempt from the registration requirements of the Securities Act pursuant to exemptions from such registration requirements and the issuance thereof will not cause such Securities to be integrated with any other offerings of securities of the Borrower including, but not limited to, those sold in the IPO. All sales of the Securities complied with all applicable state securities laws.

ARTICLE 5.

COVENANTS

Section 5.01. Affirmative Covenants. Commencing on the Closing Date and until all the Liabilities are paid in full and this Agreement and the other Documents (other than the Warrants) have been terminated, Borrower covenants and agrees that:

(a) Financial Statements and Certificates. Borrower will furnish to the Lenders, all in form and scope acceptable to the Lenders:

(i) within 120 days after the close of each fiscal year of Borrower, a copy of the annual report of Borrower consisting of a balance sheet, statement of operating results and retained earnings, statement of cash flows and notes to financial statements, profit and loss statement and statement of changes in financial position of Borrower, prepared in conformity with GAAP, duly prepared by certified public accountants of recognized standing selected by Borrower and reasonably approved by the Lenders;

(ii) within 45 days after the end of each fiscal quarter, (a) a copy of an unaudited financial statement of Borrower prepared in the same manner as the report referred to in paragraph (i) above, signed by the chief financial officer of Borrower and consisting of a balance sheet as at the close of such fiscal quarter and statements of earnings, cash flow, income and source and application of funds for such fiscal quarter and for the period from the beginning of such fiscal year to the close of such fiscal quarter, and (b) a duly completed compliance certificate, dated the date of such financial statements and certified as true and correct by the chief executive officer or chief financial officer of Borrower, stating that Borrower has not become aware of any Event of Default that has occurred and is continuing or, if there is any such Event of Default describing it and the steps, if any, being taken to cure it;

(iii) within 14 days after the end of each of the first two fiscal months ending after the Closing Date and within 7 days after the end of each fiscal month ending thereafter, (a) a copy of an unaudited financial statement of Borrower prepared in the same manner as the report referred to in paragraph (i) above, signed by the chief financial officer of Borrower and consisting of a balance sheet as at the close of such fiscal month and statements of earnings, cash flow, income and source and application of funds for such fiscal month and for the period from the beginning of such fiscal year to the close of such fiscal month, and (b) a duly completed compliance certificate, dated the date of such financial statements and certified as true and correct by the chief executive officer or

chief financial officer of Borrower, stating that Borrower has not become aware of any Event of Default that has occurred and is continuing or, if there is any such Event of Default describing it and the steps, if any, being taken to cure it;

(iv) copies of all federal and state tax returns of Borrower, including, but not limited to, requests for extensions of such tax returns, when and as filed;

(v) copies of any and all reports, examinations, notices, warnings and citations issued by any governmental or quasi-governmental (whether federal, state or local), unit, agency, body or entity with respect to Borrower; and

(vi) such other information as the Lenders from time to time reasonably requests.

(b) Books, Records and Inspections. Borrower shall (i) maintain complete and accurate books and records; (ii) permit reasonable access by the Lenders to such books and records; and (iii) permit the Lenders, upon reasonable notice, to inspect the properties, whether real or personal, and operations of Borrower.

(c) Insurance. Borrower shall maintain such insurance as may be required by law and such other insurance to the extent and against such hazards and liabilities as is customarily maintained by companies similarly situated. All property insurance policies (and the insurance policies on the Inventory), shall, within 30 days following the Closing Date, contain lender loss payable clauses in form and substance reasonably satisfactory to each Lender, naming each Lender as a lender loss payee, mortgagee and/or additional insured, as its interest may appear, and providing that such policies and lender loss payable clauses may not be canceled, amended or terminated unless at least thirty (30) days (or ten (10) days in the case of non-payment of premiums) prior written notice thereof has been given to each Lender. All insurance proceeds received by the Lenders may be retained by the Lenders, in their sole discretion, for application to the payment of the Liabilities as the Lenders may determine.

(d) Taxes and Liabilities. Borrower shall pay when due all material taxes, assessments and other liabilities except as contested in good faith and by appropriate proceedings and for which adequate reserves in conformity with GAAP have been established.

(e) Maintenance of Business; Borrower Names. Borrower shall (i) keep all property and systems useful and necessary in its business in good working order and condition, ordinary wear and tear excepted, (ii) preserve its existence in the jurisdiction of its organization or formation, as set forth on Schedule 4.01(m) and (iii) not operate in any business other than a business substantially the same as the business as in effect on the date of this Agreement; provided, however, that it may change its jurisdiction of organization or formation establishment upon thirty (30) days prior written notice to the Lenders. Borrower shall give the Lenders thirty (30) days' prior written notice before Borrower changes its name or does business under any other name.

(f) Employee Benefit Plans. Borrower shall (i) maintain each employee benefit plan as to which it may have any liability in substantial compliance with all applicable requirements of law and regulations; (ii) make all payments and contributions required to be made pursuant to

such plans in a timely manner; and (iii) neither establish any new employee benefit plan, agree or contribute to any multi-employer plan nor amend any existing employee pension benefit plan in a manner which would increase its obligation to contribute to such plan.

(g) Good Title. Borrower shall at all times maintain good and marketable title to all of its assets necessary for the operation of its business.

(h) [Reserved.]

(i) Collateral Locations. Borrower shall give the Lenders thirty (30) days prior written notice of a change in (i) its jurisdiction of organization or the location of its chief executive office or sole place of business or principal residence, (ii) its name or (iii) the location of any Collateral at any place other than the Collateral Locations, and, simultaneously therewith shall deliver to the Lenders all additional executed financing statements and other documents reasonably requested by the Lenders to maintain the validity, perfection and priority of the security interests provided for in the Documents.

(j) Inventory. Borrower agrees that notwithstanding anything to the contrary provided herein or elsewhere, and in addition to all of the other representations, warrants, agreements and covenants of the Borrower to the Lenders herein and in the other Documents, Borrower hereby represents, warranties, agrees and covenants with and to each of the Lenders (a) to insure Inventory, and, rights to the proceeds therefrom with each Lender named as loss payee; (b) not to use any Inventory for any unlawful purpose or in any way that would void any insurance required to be carried in connection therewith; (c) not to remove Inventory from Borrower's Collateral Locations except in the ordinary course of Debtor's business; (d) not to permit any security interest in or lien on the Inventory or the proceeds therefrom, including without limitation, liens arising from the storage of Inventory, except Permitted Liens; (e) not to sell, hypothecate or otherwise dispose of, nor permit the transfer by operation of law of, any of the Inventory or interests therein, except sales of Inventory to buyers in the ordinary course of Borrower's business; (g) to furnish, within 10 days (or such shorter period as Lender may specify during the existence of an Event of Default) following Lenders' request therefor, reports to the Lenders of all acquisitions, returns, sales and other dispositions of the Inventory in such form and detail as the Lenders may reasonably require; (h) to permit the Lenders to inspect the Inventory during reasonable business hours, upon 15 days (or such shorter period as Lenders may require during the existence of an Event of Default) prior written notice to Borrower, without causing any damage to any Inventory or other interruption of Borrower's business and all at the Lenders' sole cost and expense (except during an Event of Default, which during such period all costs and expenses shall be paid by the Borrower to each Lender upon request); (i) to keep, in accordance with generally accepted accounting principles, complete and accurate records regarding all Inventory and proceeds thereof, and to permit the Lenders to inspect the same and make copies thereof at any reasonable time and (j) not to sell the Inventory on terms and conditions not standard in the industry.

(k) Notices. Borrower shall, after receipt of knowledge thereof, give prompt notice to the Lenders of:

(i) the occurrence of any Event of Default or any event which with the passage of time or the giving of notice or both would become an Event of Default;

(ii) any litigation, investigation or proceeding which may exist at any time between Borrower and any governmental authority, that in either case, if not cured or if adversely determined, as the case may be, could have a Material Adverse Effect;

(iii) any litigation or proceeding affecting Borrower (1) in which the amount involved is $50,000 or more and not covered by insurance, (2) in which injunctive or similar relief is sought or (3) which relates to any Document;

(iv) any lien (other than security interests created hereby or Permitted Liens) on any of the Collateral which would adversely affect the ability of the Lenders to exercise any of its remedies under any Document;

(v) any development or event that has had or could have a Material Adverse Effect;

(vi) the occurrence of any other event which could reasonably be expected to have a material adverse effect on the aggregate value of the Collateral (and/or on the value of the Inventory alone), or the security interests created by the Documents (including the Lenders having a first priority lien on the Inventory and Patents);

(vii) any Collateral becoming Excluded Assets; and

(viii) a Major Transaction.

Each notice pursuant to this Section 5.01(k) shall be accompanied by a statement of Borrower setting forth details of the occurrence referred to therein and stating what action Borrower proposes to take with respect thereto.

(l) Environmental Laws. Borrower shall (i) comply in all material respects with, and endeavor to ensure compliance in all material respects by all tenants and subtenants, if any, with, all applicable Environmental Laws, and obtain and comply in all material respects with and maintain, and endeavor to ensure that all tenants and subtenants obtain and comply in all material respects with and maintain, any and all licenses, approvals, notifications, registrations or permits required by applicable Environmental Laws, and (ii) conduct and complete all investigations, studies, sampling and testing, and all remedial, removal and other actions required under Environmental Laws and promptly comply in all material respects with all lawful orders and directives of all governmental authorities regarding Environmental Laws.

(m) Further Assurances. Borrower shall, from time to time execute and deliver, or cause to be executed and delivered, such additional instruments, certificates or documents, and take such actions, as the Lenders may reasonably request for the purposes of implementing or effectuating the provisions of this Agreement and the other Documents, or of more fully perfecting or renewing the rights of the Lenders with respect to the Collateral (or with respect to any additions thereto or replacements or proceeds thereof or with respect to any other property or assets hereafter acquired by Borrower which may be deemed to be part of the Collateral)

pursuant hereto or thereto. Upon the exercise by the Lenders of any power, right, privilege or remedy pursuant to this Agreement or the other Documents which requires any consent, approval, recording, qualification or authorization of any governmental authority, Borrower will execute and deliver, or will cause the execution and delivery of, all applications, certifications, instruments and other documents and papers that the Lenders may be required to obtain from Borrower for such governmental consent, approval, recording, qualification or authorization.

Section 5.02. Negative Covenants. Until all the Liabilities are paid in full and this Agreement and the other Documents (other than the Warrants) have been terminated, Borrower covenants and agrees that:

(a) Restriction on Dividends and Distributions. Borrower shall not declare or pay, or authorize a declaration or payment of, any distribution, whether a cash distribution or non-cash distribution, or make any distribution in cash, property or securities in respect of, any class of its capital stock.

(b) Indebtedness. Borrower shall not incur or permit to exist any Indebtedness, except for Permitted Indebtedness.

(c) Liens. Borrower shall not create or permit to exist any mortgage, pledge, title retention lien, or other lien, encumbrance or security interest with respect to any assets now owned or hereafter acquired and owned, except for Permitted Liens.

(d) Guaranties, Loans or Advances. Borrower shall not become or be a guarantor or surety of, or otherwise become or be responsible in any manner with respect to any undertaking of any other Person, or make or permit to exist any loans or advances to or investments in any other Person, except for (i) the endorsement, in the ordinary course of collection, of instruments payable to it or to its order, (ii) investments by Borrower set forth on Schedule 5.02(d) and (iii) investments by Borrower that have synergistic benefits to the business of Borrower.

(e) Mergers, Consolidations and Sales. Borrower shall not be a party to any merger or consolidation with, or purchase or otherwise acquire all or substantially all of the assets or stock of any class of, or any partnership or joint venture interest in, any other Person, or sell, transfer, convey or lease all or any of its assets (other than the sale of Inventory in the ordinary course of business), or sell or assign, with or without recourse, any Accounts Receivable, except with the prior written consent of the Lenders.

(f) Violation of Law. Borrower shall not violate any law, statute, ordinance, rule, regulation, judgment, decree, order, writ or injunction of any federal, state or local authority, court, agency, bureau, board, commission, department or governmental body if such violation could have a Material Adverse Effect.

(g) Unconditional Purchase Obligations. Borrower shall not enter into or be a party to any contract for the purchase of materials, supplies or other property or services if such contract requires that payment be made by it regardless of whether or not delivery is ever made of such materials, supplies or other property or services.

(h) Use of Proceeds. Borrower shall not permit any proceeds of the Loan to be used either directly or indirectly, for the purpose, whether immediate, incidental or ultimate, of "purchasing or carrying any margin stock" within the meaning of Regulation U of the Board of Governors of the Federal Reserve System, as amended from time to time.

(i) Fiscal Year. Borrower shall not change its fiscal year to end other than on December 31 of each year.

(j) [Reserved].

(k) Negative Pledge Clauses. Borrower shall not enter into or suffer to exist or become effective any agreement that prohibits or limits the ability of Borrower to create, incur, assume or suffer to exist any lien upon the Collateral, whether now owned or hereafter acquired, to secure the Liabilities, other than (a) this Agreement and the other Documents and (b) any agreements governing any purchase money liens or capital lease obligations otherwise permitted hereby (in which case, any prohibition or limitation shall only be effective against the assets financed thereby).

(l) Hedge Agreements. Borrower shall not enter into any hedge agreement other than hedge agreements entered into in the ordinary course of business, and not for speculative purposes, to protect against changes in interest rates or foreign exchange rates.

(m) ERISA. Borrower shall not create or become obligated under any Plan.

(n) Excluded Assets. Borrower shall use its commercially reasonable efforts to take any and all actions to prevent any Collateral from becoming Excluded Assets.

ARTICLE 6.
CONDITIONS PRECEDENT

Section 6.01. Conditions Precedent to the Making of the Loan. The Lenders' obligation to make the Loan is subject to the fulfillment of each and every one of the following conditions prior to or contemporaneously with the making of the Loan (unless waived by Lenders in their sole and absolute discretion):

(a) Delivery of Documents. The Lenders shall have received from the Borrower each of the following, in form and substance reasonably satisfactory to the Lenders and their counsel, and where applicable, duly executed and recorded:

(i) certificates of the Chief Executive Officer and Secretary of Borrower and certifying as to (a) copies of the Certificate of Incorporation and by-laws of the Borrower, as restated or amended as of the date of this Agreement; (b) all actions taken and consents made by the Borrower and its Board of Directors and shareholders, as applicable to authorize the transactions provided for or contemplated under this Agreement and the other Documents and the execution, delivery and performance of the Documents; and (c) the names of the directors and officers of the Borrower authorized to sign the Documents, together with a sample of the true signature of each such Person;

(ii) the results of a recent lien search in the "location" (as defined in UCC) of Borrower and each such search shall reveal no liens on any of such assets;

(iii) each of (a) a UCC-1 financing statement indicating the Collateral, naming Borrower as Debtor and naming 31 Group as Secured Party, (b) a UCC-1 financing statement indicating the Collateral, naming Borrower as Debtor and naming GPB as Secured Party and (c) a Patent Security Agreement shall have been delivered to the Lenders in proper form for filing, registration or recordation;

(iv) certificates of insurance and loss payable clauses covering the Collateral and otherwise meeting the requirements of this Agreement;

(v) this Agreement;

(vi) the Notes;

(vii) the Warrants;

(viii) Certificates of good standing for Borrower in the jurisdiction of Borrower's incorporation or formation, in the principal places in which Borrower conducts business and in places in which Borrower owns real estate and/or Collateral;

(ix) Third Party Waivers for each Collateral Location identified by Lenders; and

(x) legal opinions of the Borrower's corporate, securities and intellectual property counsel customarily given in connection with transactions of this nature set forth in this Agreement and the other Documents and in form and substance reasonably satisfactory to the Lenders.

(b) Approvals. The Lenders' obligations to make the Loan is subject to the receipt by the Lenders of all governmental and third party approvals necessary in connection with the continuing operations of Borrower and the transactions contemplated hereby, all of which consents/approvals shall be in full force and effect.

(c) Additional Conditions. The Lenders' obligations to make the Loan is subject to the fulfillment of each and every one of the following conditions prior to or contemporaneously with the making of the Loan.

(i) Each of the representations and warranties made by Borrower in or pursuant to the Documents and all Schedules and/or Exhibits to this Agreement and/or any of the other Documents shall be true and correct in all material respects on and as of the Closing Date as if made (or given) on and as of such date (except where such representation and warranty speaks of a specific date in which case such representation and warranty shall be true and correct as of such date).

(ii) No Events of Default. No Event of Default or event which with the passage of time or the giving of notice or both would become an Event of Default shall have occurred or would result from the making of the Loan.

The purchase of the Notes by the Lenders on the Closing Date evidenced that each of the foregoing conditions have been satisfied or waived.

ARTICLE 7.
EVENTS OF DEFAULT

Each of the following acts, occurrences or omissions shall constitute an event of default under this Agreement (herein referred to as an "Event of Default"), whatever the reason for such Event of Default and whether it shall be voluntary or involuntary or be effected by operation of law or pursuant to any judgment or order of any court or any order, rule or regulation of any governmental or nongovernmental body or tribunal:

(a) Payment Default Under the Note. Default in the payment when due of any amount due and owing to the Lenders under the Notes on account of principal, or interest; or

(b) Other Payment Defaults. Except for the Event of Default set forth in clause (a) of this Article 7, default, and continuance thereof for three (3) Business Days after the date due, in the payment of any other amount owing by Borrower to the Lenders pursuant to the Documents or pursuant to any other

agreement, note, instrument or guarantee; or

(c) Breach of Representations and Warranties. Any representation or warranty made by Borrower contained in the Documents shall at any time prove to have been materially incorrect in any respect when made (unless such representation and/or warranty refers to a specific date, in which case, it shall be an Event of Default if the representation and/or warranty shall prove to have been materially incorrect as of such specified date); or

(d) Breach of Certain Covenants. Borrower shall default in the performance or observance of any material term, covenant, condition or agreement on its part to be performed or observed by it hereunder, and such default shall continue unremedied for five (5) Business Days after the earlier of (i) Borrower's knowledge of such default and (ii) notice from Lenders of such default; or

(e) Breach of Other Covenants. Borrower shall default in the performance or observance of any term, covenant, condition or agreement on its part to be performed or observed under the Documents (not constituting an Event of Default under any other clause of this ARTICLE 7) and such default shall continue unremedied for five (5) Business Days after the earlier of (i) Borrower's knowledge of such default and (ii) notice from Lenders of such default; or

(f) Bankruptcy Events. Either: (i) Borrower shall generally fail to pay, or admit in writing its inability to pay, such Person's debts as they become due, or a proceeding under any bankruptcy, reorganization, arrangement of debt, insolvency, readjustment of debt or receivership law or statute is filed by or against Borrower or Borrower makes an assignment for the benefit of creditors; provided, however, that no Event of Default shall exist pursuant to this

paragraph (f) due to an involuntary bankruptcy case, proceeding or petition filed against Borrower unless such involuntary case, proceeding or petition shall not have been dismissed or withdrawn within sixty (60) days after the date of such involuntary filing; (ii) Borrower shall be dissolved, whether voluntarily or involuntarily and such Person has not taken all actions required to become reinstated; or (iii) corporate or other action shall be taken by Borrower for the purpose of effectuating any of the foregoing; or

(g) Collateral Defects. Any of the provisions of ARTICLE 3 hereto shall cease, for any reason, to be in full force and effect, or any Person shall so assert, or any lien created thereby shall cease to be enforceable and of the same effect and priority purported to be created thereby; or

(h) Reserved; or

(i) Cross Defaults. Subject to any applicable cure and/or notice periods, any default shall occur under any material agreement, document or instrument binding upon Borrower, or any assets of Borrower, including, but not limited to, any default in the payment when due of any principal of or interest on any Indebtedness for money borrowed or guaranteed by Borrower, or any default in the payment when due, or in the performance or observance of, any material obligation of, or condition agreed to by, Borrower with respect to any purchase or lease of any real or personal property or services, in any such case the effect of which is to cause, or to permit the holder or beneficiary of such Indebtedness to cause, with the giving of notice if required, such Indebtedness to become due prior to its stated maturity date or to become subject to a mandatory offer to purchase by the obligor thereunder or (in the case of any such Indebtedness constituting a guarantee obligation) to become payable; or

(j) Judgments. One or more judgments or decrees shall be entered against Borrower involving a liability (not paid or fully covered by insurance as to which the relevant insurance company has acknowledged coverage) of $50,000 or more, and all such judgments or decrees shall not have been vacated, discharged, stayed or bonded pending appeal within thirty (30) days from the entry thereof.

ARTICLE 8
REMEDIES

Section 8.01. Remedies Upon Default. Upon the occurrence and continuance of any Event of Default, notwithstanding anything to the contrary provided herein, in the Documents and/or elsewhere, Lenders may, in their sole and absolute discretion, (i) declare the principal of and interest on the Notes and the Loan (including, but not limited to, the $1,000,000 aggregate principal amount of Notes and the Loan Maturity Date Payment Amount), and any and/or all of the Liabilities, and all other amounts owed under the Documents (other than the Warrants), to be immediately due and payable without presentment, demand, protest or other notice of any kind, all of which are hereby expressly waived; provided that upon the occurrence of an Event of Default under Section 7.01 (f) hereof, the principal of and interest on the Loan (including, but not limited to, the $1,000,000 aggregate principal amount of Notes and the Loan Maturity Date Payment Amount), and any or all of the Liabilities, and all other amounts owed under the Documents (other than the Warrants), shall automatically become forthwith due and payable

without presentment, demand, protest or other notice of any kind, all of which are hereby expressly waived; (ii) without presentment, demand, protest or other notice of any kind, all of which are hereby expressly waived, exercise all of the remedies of a secured party and mortgage holder under applicable law, including, but not limited to, the UCC, and all of its rights and remedies under the Documents (other than the Warrants); (iii) require Borrower to make the Collateral and the records pertaining to the Collateral available to the Lenders at a place designated by the Lenders which is reasonably convenient or the Lenders may take possession of the Collateral and the records pertaining to the Collateral without the use of any judicial process and without any prior notice thereof to Borrower; (iv) sell any or all of the Collateral at public or private sale upon such terms and conditions as Lenders may reasonably deem proper, and, to the extent permitted by applicable law, Lenders may purchase any or all of the Collateral at any such sale, and apply the net proceeds, after deducting all costs, expenses and attorneys' fees incurred at any time in the collection of the Liabilities and in the protection and sale of the Collateral, to the payment of the Liabilities, returning the remaining proceeds, if any, to Borrower, with Borrower remaining liable for any amount remaining unpaid after such application; (v) grant extensions, compromise claims and settle Accounts Receivable for less than face value, all without prior notice to Borrower; and (vi) use, in connection with any assembly or disposition of the Collateral, any trademark, trade name, trade style, copyright, patent right or technical process used or utilized by Borrower. Borrower shall, upon the request of the Lenders, forthwith upon receipt, transmit and deliver to the Lenders in the form received, all cash, checks, drafts and other instruments for the payment of money (properly endorsed, where required, so that such items may be collected by Lenders) which may be received by Borrower at any time in full or partial payment of any Collateral. Borrower shall not commingle any such items which may be so received by Borrower with any other of its funds or property but shall hold them separate and apart from their own funds or property and in trust for the Lenders until delivery is made to the Lenders. The Lenders may exercise all of its rights and remedies against Borrower under applicable law and the Documents.

Section 8.02. Attorney-In-Fact. Borrower hereby appoints each Lender as such Person's attorney-in-fact, with full authority in such Person's place and stead and in such Person's name or otherwise, from time to time in Lenders' sole and arbitrary discretion after the occurrence and continuation of any Event of

Default, to, acting jointly, take any action and to execute any instrument which Lenders may deem necessary or advisable to accomplish the purpose of this Agreement.

Section 8.03. Remedies Are Severable and Cumulative. All provisions contained herein pertaining to any remedy of the Lenders shall be and are severable and cumulative and in addition to all other rights and remedies available in the Documents, at law and in equity, and any one or more may be exercised simultaneously or successively. Any notification required pursuant to this ARTICLE 8 or under applicable law shall be reasonably and properly given to Borrower at the address and by any of the methods of giving such notice as set forth in Section 9.3 at least two (2) days before taking any action.

Section 8.04. Default Limitations. Notwithstanding anything to the contrary set forth herein, in no event will the financial condition of the Borrower as of the Closing Date or any adverse change thereto following the Closing Date (other than any adverse change following the Closing Date which has had or would reasonably be expected to have a Material Adverse Effect

after the Closing Date) serve as the basis for any Event of Default based upon a breach of Section 4.01(v) of this Agreement. Each Lender acknowledges that it has had the opportunity to conduct due diligence and investigation with respect to the Company, and in no event shall Borrower have any liability to any Lender with respect to a breach of representation, warranty or covenant under this Agreement to the extent that such Lender knew of such breach as of the Closing Date.

ARTICLE 9
MISCELLANEOUS

Section 9.1. No Waiver; Modifications In Writing. No failure or delay on the part of Lenders in exercising any right, power or remedy pursuant to the Documents shall operate as a waiver thereof, nor shall any single or partial exercise of any such right, power or remedy preclude any other or further exercise thereof, or the exercise of any other right, power or remedy. No amendment, modification, supplement, termination or waiver of any provision of the Documents, nor any consent by the Lenders to any departure by Borrower therefrom, shall be effective unless the same shall be in writing and signed by the Lenders. Any waiver of any provision of the Documents and any consent by the Lenders to any departure by Borrower from the terms of any provision of the Documents shall be effective only in the specific instance and for the specific purpose for which given. No notice to or demand on Borrower in any case shall entitle Borrower to any other or further notice or demand in similar or other circumstances.

Section 9.2. Set-Off. The Lenders shall have the right to set-off, appropriate and apply toward payment of any of the Liabilities, in such order of application as the Lenders may from time to time and at any time elect, any cash, credit, deposits, accounts, securities and any other property of Borrower which is in transit to or in the possession, custody or control of a Lender, or any agent, bailee, or Affiliate of the Lenders. Borrower hereby grants to Lenders a security interest in all such property.

Section 9.3. Notices. All notices, demands, instructions and other communications required or permitted to be given to or made upon any party hereto shall be in writing personally delivered or sent by overnight courier, by facsimile machine or email, and shall be deemed to be given for purposes of this Agreement on the day that such writing is delivered or sent by facsimile machine or email or one (1) business day after such notice is sent by overnight courier to the intended recipient thereof in accordance with the provisions of this Section 9.3. Unless otherwise specified in a notice sent or delivered in accordance with the foregoing provisions of this Section 9.3, notices, demands, instructions and other communications in writing shall be given to or made upon the respective parties hereto at their respective addresses indicated for such party below:

If to Borrower:
Jaguar Animal Health, Inc.
185 Berry Street
Suite 1300
San Francisco, CA 94105
Attention: Lisa A. Conte
Phone: 415 516 2732

Fax No.: 415 371 8311
Email: lconte@jaguaranimalhealth.com

With copies to
(which shall not constitute notice):

Reed Smith LLP
1510 Page Mill Road
Suite 110
Palo Alto, California 94304
Attention: Donald Reinke, Esq.
Phone: (650) 352 0532
Fax No.: (650) 352 0699
Email: dreinke@reedsmith.com

and to:

Reed Smith LLP
10 S. Wacker Drive
Chicago, Illinois 60606
Attention: Benjamin L. Brimeyer, Esq.
Phone: (312) 207-6423
Fax No.: (312) 207-6400
Email: bbrimeyer@reedsmith.com

If to 31 Group:

31 Group LLC
C/o Magna
5 Hanover Square
Suite #1604
New York, NY 10004
Attention: Research Desk
Phone: (347) 491-4240
Fax No.: (646) 737-9948
Email: Research@Mag.Na

With copies to
(which shall not constitute notice):

Gusrae Kaplan Nusbaum PLLC
120 Wall Street
New York, New York 10005

Attention: Lawrence G. Nusbaum, Esq.
Phone: (212) 269-1400
Fax No.: (212) 809-5449
Email: LNusbaum@gusraekaplan.com

If to GPB Life Science Holdings LLC:

GPB Life Science Holdings LLC
535 West 24th Street, 4th Floor
New York, NY 10011
Attention: Dustin Muscato
Phone: (212) 235-2650
Email: dmuscato@gpb-cap.com

With copies to
(which shall not constitute notice):

James A. Prestiano, Esq.
631 Commack Road, Suite 2A
Commack, NY 11727
Phone: (631) 499-6000
Fax No.: (631) 499-6001
Email: james@prestianolaw.com

Any party hereto may from time to time change its address for notices by giving written notice of such changed address to the other party hereto.

Section 9.4. Costs, Expenses and Taxes. Borrower agrees to pay (A) all reasonable and documented out of pocket fees and expenses of the Lenders (including, but not limited to, UCC filing and search fees, other fees and expenses incurred in connection with the perfection of the liens granted to the Lenders pursuant to the Documents and fees and expenses of outside counsel to the Lenders and paralegals) in connection with the making of the Loan and the negotiation, preparation, execution and delivery of the Documents, provided that Borrower shall have no obligation to pay more than the required $35,000 legal fee payment to Lenders' legal counsel (plus documented out-of-pocket expenses); and (B) all fees and expenses of the Lenders (including, but not limited to, outside counsel to the Lenders) in connection with the administration and enforcement of the Documents and the Loan. Without limitation, Borrower acknowledges and agrees that the Lenders' field audit and appraisal fees shall be charged to Borrower. In addition, Borrower shall pay any and all stamp, transfer and other similar taxes payable or determined to be payable in connection with the execution and delivery of the Documents and agrees to hold the Lenders harmless from and against any and all liabilities with respect to or resulting from any delay in paying or omission to pay such taxes. If any suit or proceeding arising from any of the foregoing is brought against one or both of the Lenders, Borrower, to the extent and in the manner directed by each Lender, will resist and defend such suit or proceeding or cause the same to be resisted and defended by counsel approved by each

Lender. If Borrower shall fail to do any act or thing which each has covenanted to do under this Agreement or any representation or warranty on the part of Borrower contained in this Agreement shall be breached, the Lenders may, in their sole and absolute discretion, acting jointly (unless one Lender authorizes the other Lender to act on its behalf), do the same or cause it to be done or remedy any such breach, and may expend its funds for such purpose; and any and all amounts so expended by the Lenders shall be repayable to the Lenders by Borrower immediately upon each Lender's demand therefor, with interest at a rate equal to the highest interest rate set forth in effect from time to time during the period from and including the date funds are so expended by the Lenders to the date of repayment, and any such amounts due and owing to the Lenders shall be deemed to be part of the Liabilities secured hereunder and under the other Documents. The obligations of Borrower under this Section 9.4 shall survive the termination of this Agreement and the discharge of the other obligations of Borrower under the Documents.

Section 9.5. Indemnity, Etc. In addition to the payment of expenses pursuant to Section 9.4, whether or not the transactions contemplated hereby shall be consummated, Borrower agrees to indemnify, pay and hold each Lender, and each of such Lender's assignees and affiliates and their respective officers, directors, employees, agents, consultants, auditors, Persons engaged by it to evaluate or monitor the Collateral, and attorneys of any of them (collectively called

the "Indemnities") harmless from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements of any kind or nature whatsoever (including the reasonable fees and disbursements of counsel for such Indemnitees in connection with any investigative, administrative or judicial proceeding commenced or threatened, whether or not such Indemnitee shall be designated a party thereto) that may be imposed on, incurred by, or asserted against that Indemnitee, in any manner relating to or arising out of this Agreement or the other Documents, the consummation of the transactions contemplated by this Agreement and the other Documents, the statements contained in any term sheet delivered by the Lenders, the Lenders' agreement to make the Loan, the use or intended use of the proceeds of the Loan or the exercise of any right or remedy hereunder or under the other Documents (the "Indemnified Liabilities"); provided that Borrower shall have no obligation to an Indemnitee hereunder with respect to Indemnified Liabilities directly arising from the gross negligence or willful misconduct of that Indemnitee, as determined by a court of competent jurisdiction by a final and nonappealable judgment. In no event shall any of the Lenders and/or any of their respective employees, agents, partners, affiliates, members, equity and/or debt holders, managers, officers, directors and/or other related or similar type of Person, have any liability to the Borrower and/or any of its officers, directors, employees, equity and/or debt holders except for any actions or lack of actions of such persons that are found by a court of competent jurisdiction after the time for all appeals has passed to have resulted from either of the Lenders and/or the Lenders related persons named above intentional misconduct or gross negligence. No Lender shall be liable to the Borrower for any action and/or non-action of the other Lender.

Section 9.6. Counterparts; Signatures. This Agreement may be executed in any number of counterparts, each of which counterparts, once they are executed and delivered, shall be deemed to be an original and all of which counterparts, taken together, shall constitute but one and the same agreement. This Agreement and the Documents may be executed by any party to

this Agreement or any of the Documents by original signature, facsimile and/or electronic signature.

Section 9.7. Binding Effects; Assignment. This Agreement shall be binding upon, and inure to the benefit of, the Lenders, Borrower and their respective successors, assigns, representatives and heirs. Borrower shall not assign any of its rights nor delegate any of its obligations under Documents without the prior written consent of Lenders. Unless an Event of Default has occurred and is continuing, no Lender may delegate any of its obligations under the Documents without the prior written consent of Borrower. Each Lender, however, may assign any of its rights, hereunder, and/or in any of the other Documents except that no Lender may assign any of its rights hereunder or under any other Document to any competitor of Borrower or any of such competitor's parent companies.

Section 9.8. Headings. Captions contained in this Agreement are inserted only as a matter of convenience and in no way define, limit or extend the scope or intent of this Agreement or any provision of this Agreement and shall not affect the construction of this Agreement.

Section 9.9. Entire Agreement. This Agreement, together with the other Documents, contains the entire agreement between the parties hereto with respect to the transactions contemplated herein and therein and supersede all prior representations, agreements, covenants and understandings, whether oral or written, related to the subject matter of this Agreement and the other Documents. Except as specifically set forth in this Agreement, the Lenders make no covenants to Borrower, including, but not limited to, any commitments to provide any additional financing to Borrower.

Section 9.10. GOVERNING LAW. THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES UNDER THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED EXCLUSIVELY IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK WITHOUT GIVING EFFECT TO ANY CONFLICT OF LAWS.

Section 9.11. Severability Of Provisions. Any provision of this Agreement which is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective only to the extent of such prohibition or unenforceability without invalidating the remaining provisions of this Agreement or affecting the validity or enforceability of such provision in any other jurisdiction.

Section 9.12. Conflict. In the event of any conflict between this Agreement and any of the other Documents, the terms and provisions of this Agreement shall govern and control.

Section 9.13. Customer Identification - USA Patriot Act Notice; OFAC and Bank Secrecy Act. Each Lender hereby notifies Borrower that pursuant to the requirements of the Act and such Lender's policies and practices, the Lenders are required to obtain, verify and record certain information and documentation that identifies Borrower, which information includes the name and addresses of Borrower and such other information that will allow the Lenders to identify Borrower in accordance with the Act. In addition, Borrower shall (a) ensure that no person who owns a controlling interest in or otherwise controls Borrower is or shall be listed on

the Specially Designated Nationals and Blocked Person List or other similar lists maintained by OFAC, the Department of the Treasury or included in any Executive Orders, (b) not use or permit the use of the proceeds of the Loan to violate any of the foreign asset control regulations of OFAC or any enabling statute or Executive Order relating thereto, and (c) comply, and cause any of its Subsidiaries to comply, with all applicable Bank Secrecy Act ("BSA") laws and regulations, as amended.

Section 9.14. JURISDICTION; WAIVER. BORROWER ACKNOWLEDGES THAT THIS AGREEMENT IS BEING SIGNED BY THE LENDERS IN PARTIAL CONSIDERATION OF THE LENDERS' RIGHT TO ENFORCE IN THE JURISDICTION STATED BELOW THE TERMS AND PROVISION OF THIS AGREEMENT AND THE DOCUMENTS. BORROWER CONSENTS TO THE EXCLUSIVE AND SOLE JURISDICTION IN THE STATE OF NEW YORK AND VENUE IN ANY FEDERAL OR STATE COURT IN THE COUNTY OF NEW YORK, NEW YORK FOR SUCH PURPOSES AND WAIVES ANY AND ALL RIGHTS TO CONTEST SAID JURISDICTION AND VENUE AND ANY OBJECTION THAT SAID COUNTY IS NOT CONVENIENT. BORROWER WAIVES ANY RIGHTS TO COMMENCE ANY ACTION AGAINST THE LENDERS IN ANY JURISDICTION EXCEPT THE AFORESAID COUNTY AND STATE. THE LENDERS AND BORROWER HEREBY EACH EXPRESSLY WAIVE ANY AND ALL RIGHTS TO A TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM BROUGHT BY ANY OF THE PARTIES AGAINST ANY OTHER PARTY WITH RESPECT TO ANY MATTER WHATSOEVER RELATING TO, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE LOAN, THE DOCUMENTS AND/OR THE TRANSACTIONS WHICH ARE THE SUBJECT OF THE DOCUMENTS.

Section 9.15. SERVICE OF PROCESS. BORROWER AGREES THAT SERVICE OF PROCESS IN ANY ACTION OR PROCEEDING MAY BE EFFECTED BY MAILING A COPY THEREOF BY CERTIFIED MAIL (OR ANY SUBSTANTIALLY SIMILAR FORM OF MAIL), POSTAGE

PREPAID, RETURN RECEIPT REQUESTED, TO BORROWER AT THE ADDRESS SET FORTH IN SECTION 9.3 OR AT SUCH OTHER ADDRESS OF WHICH THE LENDERS SHALL HAVE BEEN NOTIFIED PURSUANT THERETO. BORROWER AGREES THAT SUCH SERVICE, TO THE FULLEST EXTENT PERMITTED BY LAW (i) SHALL BE DEEMED IN EVERY RESPECT EFFECTIVE SERVICE OF PROCESS UPON BORROWER IN ANY SUIT, ACTION OR PROCEEDING, AND (ii) SHALL BE TAKEN AND HELD TO BE VALID PERSONAL SERVICE UPON AND PERSONAL DELIVERY TO BORROWER. SOLELY TO THE EXTENT PROVIDED BY APPLICABLE LAW, SHOULD BORROWER, AFTER BEING SERVED, FAIL TO APPEAR OR ANSWER TO ANY SUMMONS, COMPLAINT, PROCESS OR PAPERS SO SERVED WITHIN THE NUMBER OF DAYS PRESCRIBED BY LAW AFTER THE DELIVERY OR MAILING THEREOF, BORROWER SHALL BE DEEMED IN DEFAULT AND AN ORDER AND/OR JUDGMENT MAY BE ENTERED BY THE COURT AGAINST BORROWER AS DEMANDED OR PRAYED FOR IN SUCH SUMMONS, COMPLAINT, PROCESS OR PAPERS. NOTHING HEREIN SHALL AFFECT THE LENDERS' RIGHT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY LAW.

Section 9.16. Survival. The representations, and warranties of Borrower shall survive the execution and delivery hereof and the Closing Date (if any); the agreements and covenants of

the Borrower set forth in this Agreement including, but not limited to, those set forth in ARTICLE 2 and ARTICLE 5 shall survive the execution and delivery hereof and the Closing Date (if any), as shall all rights and remedies of each Lender set forth in this Agreement and/or the Documents. The provisions of Section 2.7, Section 2.8, Section 2.9, Section 9.3, Section 9.4, Section 9.5, Section 9.10, Section 9.14, Section 9.15, and this Section 9.16 shall survive the termination of this Agreement.

ARTICLE 10.
WARRANTS

Section 10.1. Warrants Generally. Each Lender hereby agrees to be bound by the terms of and to comply in all respects with each Warrant issued to such Lender.

ARTICLE 11.
USURY

Section 11.01. Usury Saving Clause. Notwithstanding anything to the contrary provided in this Agreement, or elsewhere, the Lenders shall never be entitled to charge, receive or collect, nor shall amounts received by the Lenders be credited as interest so that the Lenders shall be paid by the Borrower, a sum greater than interest at the maximum nonusurious interest rate, if any, that at any time may be contracted for, charged, received, or collected on the indebtedness evidenced by the Notes under applicable law (the "Maximum Rate"). It is the intention of the Borrower and the Lenders that this Agreement, the other Documents and the Warrant comply with all applicable law. If the Lenders ever contract for, charge, receive, or collect, anything of value from the Borrower which is deemed to be interest under applicable law, and if the occurrence of any circumstance, event or contingency, should cause such interest to exceed the Maximum Rate, any such excess amount shall be applied to the reduction of the unpaid aggregate principal amount of the Notes owed to the Lenders by the Borrower and if the Notes are already paid in full, any remaining excess shall be paid to the Borrower. In determining whether or not interest paid or payable with respect to the Notes exceeds the Maximum Amount, the Borrower and the Lenders shall, to the maximum extent permitted by applicable law, (i) characterize any nonprincipal payment as an expense, fee or premium rather than as interest, (ii) amortize, prorate, allocate and spread the total amount of interest throughout the full term of the Notes so that the actual rate of interest on account of such indebtedness is uniform throughout the term of the Notes and/or (iii) allocate interest between portions of the Notes, to the end that no such portion shall bear interest at a rate greater than that permitted by applicable law. The terms and provisions of this Section 11.01 shall control and supersede every other conflicting provision of all agreements between the Borrower and the Lenders.

Section 11.01 Independent Advice. The Borrower hereby acknowledges, represents and warrants that it (i) has been advised by the Lenders to seek the advice of its legal, tax and accounting experts in connection with the Loan and other transactions set forth in this Agreement and the other Documents, as to, among other items, the tax and accounting effects thereof, and (ii) it has had the opportunity and has subsequent the advice of legal, tax and accounting experts of the Borrower's choice in connection with the Loan and transactions set forth in this Agreement and the other Documents.

[BALANCE OF PAGE INTENTIONALLY LEFT BLANK; SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and delivered as of the date first above written.

BORROWER: JAGUAR ANIMAL HEALTH, INC.

By: /s/ Lisa A. Conte
Name: Lisa A. Conte
Title: Chief Executive Officer & President

LENDERS: 31 GROUP, LLC

By: /s/ Joshua Sason
Name: Joshua Sason
Title: Managing Member

GPB LIFE SCIENCE HOLDINGS LLC

By: /s/ David Gentile
Name: David Gentile
Title: Member

[SIGNATURE PAGE TO STANDBY BRIDGE FINANCING AGREEMENT]

EXHIBIT I

Form of Note

THIS NOTE HAS BEEN ACQUIRED FOR INVESTMENT PURPOSES ONLY AND MAY NOT BE SOLD UNTIL (I) A REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT") SHALL HAVE BECOME EFFECTIVE WITH RESPECT THERETO OR (II) RECEIPT BY THE BORROWER OF AN OPINION OF COUNSEL OF THE HOLDER OR THE BORROWER TO THE EFFECT THAT REGISTRATION UNDER THE ACT IS NOT REQUIRED IN CONNECTION WITH SUCH PROPOSED SALE, ASSIGNMENT AND/OR OTHER TRANSFER OF THIS NOTE. THIS LEGEND SHALL BE INCLUDED ON ANY NOTE ISSUED IN EXCHANGE FOR THIS NOTE. NOTWITHSTANDING ANYTHING TO THE CONTRARY PROVIDED HEREIN OR ELSEWHERE, THIS NOTE AND/OR ANY RIGHTS OF THE HOLDER HEREUNDER MAY BE TRANSFERRED IN ACCORDANCE WITH AND PURSUANT TO THE TERMS SET FORTH IN THIS NOTE AND/OR THE BRIDGE AGREEMENT.

SENIOR SECURED NOTE

Aggregate Principal Amount Note: $500,000 Issue Date: December 2, 2014
Note No.: GPB-1

FOR VALUE RECEIVED, the Undersigned, JAGUAR ANIMAL HEALTH, INC., a Delaware corporation (the "**Borrower**"), hereby promises to pay to the order of GPB LIFE SCIENCE HOLDINGS, LLC, ("**GPB**") and/or any of its successors, and/or assignees (the "**Holder**"), at the office of GPB located at 535 West 24th Street, 4th Floor, New York, NY 10011, New York, New York, or at such other place as any Holder may from time to time designate to Borrower in writing, all aggregate principal amount of this Note, premium payments, interest (provided in no event shall the maximum rate of interest exceed the maximum amount permitted by law and the parties do not intend for the maximum rate of interest to exceed the maximum rate permitted by law), and all other amounts due and owing to the Holder pursuant to the Amended and Restated Standby Bridge Financing Agreement by and among GPB, 31 Group, LLC and Borrower dated as of December 2, 2014 (as amended, restated, supplemented or modified from time to time, the "**Bridge Agreement**"), and the other Documents (other than the Warrants) on the dates, at the rates and in the amounts provided in the Bridge Agreement and the other Documents. Capitalized terms not otherwise defined herein shall have the meanings provided in the Bridge Agreement.

This Senior Secured Note (this "**Note**") is executed and delivered pursuant to the terms of the Bridge Agreement.

Except as otherwise provided in the Bridge Agreement, this Note shall mature and be due and payable on the Loan Maturity Date.

This Note is subject to Optional Prepayment, in whole (but not in part), on the terms and conditions set forth in the Bridge Agreement.

This Note is secured, inter alia, by the liens, the security interests, UCC Financing Statements and other similar documents and/or instruments and collateral granted and provided pursuant and on the terms and conditions set forth in the Bridge Agreement and the Patent Security Agreement. Notwithstanding any provision to the contrary contained herein or elsewhere to the contrary, this Note is entitled to all the direct and indirect rights, benefits, remedies, covenants, agreements and related items contained and/or referenced in the Bridge Agreement and the other Documents, all of which are expressly incorporated by reference herein.

Reference to the Bridge Agreement and the other Documents shall in no way impair the absolute and unconditional obligation of the Borrower to (i) pay all aggregate principal amount, premiums, interest, and all other amounts owed to the Holder pursuant to the Bridge Agreement and the other Documents, and (ii) perform all of its other obligations hereunder as provided herein, in the Bridge Agreement and/or in any of the other Documents.

Upon the occurrence of an Event of Default, the Holder shall have the rights and remedies as provided in the Bridge Agreement.

The terms of this Note are subject to amendment only by the express written consent of the Holder and the Borrower.

ANY CONFLICT BETWEEN ANY TERMS OF THIS NOTE AND THE BRIDGE AGREEMENT SHALL BE RESOLVED BY REFERENCE TO THE BRIDGE AGREEMENT.

This Note shall be governed by and construed solely and exclusively in accordance with the internal laws of the State of New York without regard to the conflicts of laws principles thereof. The parties hereto hereby expressly and irrevocably agree that any suit or proceeding arising directly and/or indirectly pursuant to or under this Note shall be brought solely in a federal or state court located in the City, County and State of New York. By its execution hereof, the parties hereby covenant and irrevocably submit to the in personam jurisdiction of the federal and state courts located in the City, County and State of New York and agree that any process in any such action may be served upon any of them personally, or by certified mail or registered mail upon them or their agent, return receipt requested, with the same full force and effect as if personally served upon them in New York City. The parties hereto expressly and irrevocably waive any claim that any such jurisdiction is not a convenient forum for any such suit or proceeding and any defense or lack of in personam jurisdiction with respect thereto. In the event of any such action or proceeding, the party prevailing therein shall be entitled to payment from the other party hereto of all of its reasonable counsel fees and disbursements.

All payments due in respect of this Note shall be made in lawful money of the United States of America in immediately available funds as provided in the Bridge Agreement.

The Borrower expressly waives any presentment, demand, protest, notice of protest, notice of any kind and/or any other similar items except as otherwise expressly provided in the Bridge Agreement.

Whenever any payment on this Note shall be due on a day which is not a Business Day, such payment shall be made on the next succeeding Business Day and such extension of time shall be included in the computation of the payment of Cash Interest and/or Additional Interest.

Subject to compliance with applicable securities laws, this Note and/or any rights provided to the Holder herein may be transferred and/or assigned, at any time and from time to time, in whole or in part, by the Holder. Neither this Note, the Bridge Agreement, the Loan, any Liabilities and/or any obligations of the Borrower to the Holder may be directly and/or indirectly assigned by the Borrower (except to a successor in the event of a Major Transaction solely to the extent provided in the Bridge Agreement). This Note and all rights and obligations hereof shall be binding on and inure to the benefit of the parties hereto and their respective and permitted successors and assigns. Subject to the preceding sentence, nothing in this Note shall be construed to give to any Person other than the Borrower and the Holder any legal or equitable right, remedy or cause of action under this Note. Any attempted assignment in violation the terms of this Note shall be null and void. Notwithstanding any assignment of all or a portion of this Note, the Bridge Agreement and/or the Loan, GPB, for all purposes relating to dealings with the Collateral, the patent and collateral set forth in the Patent Security Agreement, the Blocked Account and the other Documents, shall remain the Lender in the Bridge Agreement.

[Signature page follows]

IN WITNESS WHEREOF, this Note has been executed and delivered as of the date first written above.

JAGUAR ANIMAL HEALTH, INC.

By: _____
Name:
Title:

Signature Page to Senior Secured Note

Exhibit II

Lenders Pro-Rata Percentage, Etc.

Lender	Percentage of $900,000 Purchase Price to be paid by each Lender	Dollar Amount of $900,000 Purchase Price to be Paid by each Lender	Aggregate Principal Amount of Notes to be received by each Lender
1. 31 Group LLC	50%	$ 450,000	$ 500,000
2. GPB Life Science Holdings LLC	50%	$ 450,000	$ 500,000

Exhibit III

Form of Warrant

THIS WARRANT AND ANY COMMON STOCK ISSUED UPON THE EXERCISE OF THIS WARRANT HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE OFFERED, SOLD, OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN APPLICABLE EXEMPTION THEREFROM, AS EVIDENCED BY A LEGAL OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY TO SUCH EFFECT. NOTWITHSTANDING THE FOREGOING, THIS WARRANT AND THE COMMON STOCK ISSUABLE UPON EXERCISE OF THIS WARRANT MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY SUCH SECURITIES.

JAGUAR ANIMAL HEALTH, INC.

EXCHANGE WARRANT TO PURCHASE COMMON STOCK

Warrant No. Original Issue Date: December 3, 2014

JAGUAR ANIMAL HEALTH, INC., a Delaware corporation (the "**Company**"), hereby certifies that, for value received, [ ], or its permitted assigns (the "**Holder**"), is entitled to purchase from the Company that whole number of shares of common stock, par value $0.0001 per share (the "**Common Stock**") of the Company as determined by dividing $500,000 by the Exercise Price (as defined below) (each such share, a "**Warrant Share**" and all such shares, the "**Warrant Shares**") at an exercise price per share equal to the Exercise Price. This Warrant may be exercised at any time and from time to time

commencing on the date six (6) months from December 3, 2014 (the "**Commencement Date**"), and through and including 5:00 P.M., New York City time, on the fifth anniversary of the Commencement Date (the "**Expiration Date**"), subject to the following terms and conditions:

This Warrant (this "**Warrant**") is one of two (2) substantially similar warrants originally issued to the Lenders pursuant to the Credit Agreement.

1. Definitions. All capitalized terms used in this Warrant but not otherwise defined in this Warrant shall have the meaning set forth in the Credit Agreement. In addition to the terms defined elsewhere in this Warrant, the following terms shall have the following meanings:

"**Credit Agreement**" means that Amended and Restated Standby Bridge Financing Agreement dated as of December 2, 2014, by and among, 31 Group, LLC, GPB Life Science Holdings LLC and Jaguar Animal Health, Inc.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

"**Exercise Price**" shall mean (i) if this Warrant is exercised in whole or in part by the Holder prior to the pricing of the shares of Common Stock being sold to the public in any initial public offering by the

Company of its Common Stock (an "**IPO**"), solely as to those shares that the Holder is purchasing from the Company by exercising this Warrant during such period, the lowest of (a) eighty (80%) percent of the lowest gross price a share of Common Stock is sold in any Qualified Private Placement; and (b) if in any such Qualified Private Placement, the Company sells and/or issues securities of the Company that are exercisable, exchangeable and/or convertible into Common Stock ("**Common Stock Equivalents**"), 80% of the lowest (1) gross price that any Common Stock Equivalent is sold at; and (2) the gross price any Common Stock Equivalent is exercisable, convertible and/or exchangeable into a share of Common Stock, or into another Common Stock Equivalent, in both cases in this Section (i)(b)(2) the gross price is as of the closing date of each Qualified Private Placement in which any such Common Stock Equivalent is sold and/or issued (the lowest of (i)(a) and (b) shall be referred to herein as the "**Pre-IPO Exercise Price**"), and (ii) if this Warrant is exercised in whole or in part following an IPO, solely as to those shares that the Holder is purchasing from the Company by exercising this Warrant during such period, the lowest of (a) the Pre-IPO Exercise Price, and (b) eighty (80%) percent of the gross price a share of Common Stock is sold to the public in the IPO. The Exercise Price shall be in all cases further adjusted as provided elsewhere in this Warrant.

"**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

"**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

2. Registration of Warrant. The Company on the Closing Date shall register this Warrant, upon records to be maintained by the Company for that purpose (the "**Warrant Register**"), in the name of the record Holder (which shall include the initial Holder or, as the case may be, any registered assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company may deem and treat the registered Holder as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary. The initial address until changed as provided in this Warrant, shall be the address of the Holder provided in the Credit Agreement.

3. Transfers. The Company need not register a transfer of this Warrant unless the conditions specified in the legends on the front page hereof are satisfied and the transferee has agreed in writing to be subject to the terms and conditions of this Warrant, including transferee acknowledging in writing that it meets the investor suitability criteria set forth in this Warrant and Exhibit C attached hereto. The registered Holder of this Warrant agrees by his, her or its acceptance hereof, that neither this Warrant nor any Warrant Shares issued upon exercise of this Warrant shall be sold, transferred, assigned, pledged or hypothecated by any Person prior to the Commencement Date. On or after the Commencement Date, transfer of this Warrant may be made, subject to the restrictions on transfer set forth in this Warrant and compliance with all applicable securities laws and the Company shall register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, with the Form of Assignment (an "**Assignment**") attached as Exhibit A hereto duly completed and signed, to the Company at its address specified in Section 13. No ink original of any Assignment shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Assignment be required. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a "**New Warrant**") evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations of a Holder of a Warrant.

4. Exercise and Duration of Warrant.

(a) Subject to Holder executing and complying with Exhibit C and Section 17 below, all or any part of this Warrant shall be exercisable, in whole or in part, by the registered Holder at any time and from time to time on or after the Commencement Date and through and including 5:00 p.m., New York City time, on the Expiration Date. At 5:00 p.m., New York City time, on the Expiration Date, this Warrant shall be terminated and no longer outstanding; provided, however that, notwithstanding the foregoing, without any further action by or on behalf of the Holder, this Warrant shall automatically be deemed to be exercised in full pursuant to the net exercise provisions of Section 10 effective immediately prior to such termination.

(b) Subject to Holder executing and complying with Exhibit C and Section 17 below, the Holder may exercise this Warrant, not later than 5:00 p.m., New York City time, on any Business Day following the Original Issue Date and prior to the Expiration Date, by delivering to the Company (i) an exercise notice, in the form attached as Exhibit B hereto (the "**Exercise Notice**"), appropriately completed and duly signed, (ii) the Investment Representation Statement in the form attached as Exhibit C hereto, appropriately completed and duly signed, and (iii) payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a "cashless exercise" if so indicated in the Exercise Notice and if a "cashless exercise" may occur at such time pursuant to Section 10), and the date such items are delivered to the Company (as determined in accordance with the notice provisions hereof) is an "**Exercise Date**." If the Exercise Notice is received by the Company after 5:00 p.m., New York City time, on the specified Exercise Date, this Warrant will be deemed to be received and exercised on the Trading Day next succeeding the Exercise Date. The Holder shall not be required to deliver the

original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares. No ink original of any Exercise Notice shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Exercise Notice be required.

5. Delivery of Warrant Shares.

(a) Subject to Section 11 below, upon exercise of this Warrant, the Company shall promptly (but in no event later than three Trading Days (as defined below) after the Exercise Date) issue or cause to be issued and cause to be delivered to or upon the written order of the Holder and in such name or names as the Holder may designate, a certificate for the Warrant Shares issuable upon such exercise.. The Holder, or any Person permissibly so designated by the Holder to receive Warrant Shares, shall be deemed to have become the holder of record of such Warrant Shares as of the Exercise Date. If the Warrant Shares are eligible to be issued free of all restrictive legends in accordance with applicable state and federal securities laws and the terms and conditions of this Warrant, in lieu of delivering physical certificates representing the Warrant Shares issuable upon exercise, provided the Company's transfer agent is participating in The Depository Trust Company's Fast Automated Securities Transfer program, upon the written request of the Holder, the Company shall use its commercially reasonable efforts to deliver, or cause to be delivered, Warrant Shares hereunder electronically through The Depository Trust Company or another established clearing corporation performing similar functions, if available. "**Trading Day**" means any day on which the shares of Common Stock are traded on the NASDAQ Stock Market, or, if the NASDAQ Stock Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock are then traded; *provided* that "Trading Day" shall not include any day on which the Common Stock are scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock are suspended from trading during the final hour of trading on such exchange or market

(or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time).

(b) If by the close of the third Trading Day after delivery of a properly completed Exercise Notice (and any other documents required pursuant to Section 5(a)), the Company fails to deliver to the Holder the required number of Warrant Shares in the manner required pursuant to Section 5(a), and if on or after the Trading Day immediately following such third Trading Day and prior to the receipt of such Warrant Shares, the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "**Buy-In**"), then the Company shall, within three Trading Days after the Holder's request and in the Holder's sole discretion, either (i) pay in cash to the Holder an amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the "**Buy-In Price**"), at which point the Company's obligation to deliver such certificate (and to issue such Warrant Shares) shall terminate or (ii) promptly honor its obligation to deliver to the Holder Warrant Shares and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of Warrant Shares, times (B) the Closing Sales Price (as defined below) on the date of receipt of a properly completed Exercise Notice.

(c) To the extent permitted by law, the Company's obligations to issue and deliver Warrant Shares in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Nothing herein shall limit the Holder's right to pursue any other remedies available to the Holder hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver Common Stock upon exercise of this Warrant as required pursuant to the terms hereof.

6. Charges, Taxes and Expenses. Issuance and delivery of certificates for shares of Common Stock upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense in respect of the issuance of such certificates, all of which taxes and expenses shall be paid by the Company; provided, however, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares or Warrants in a name other than that of the Holder or an affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

7. Replacement of Warrant. If this Warrant is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable indemnity (which shall not include a surety bond), if requested. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to issue the New Warrant.

8. Reservation of Warrant Shares. The Company covenants that it will reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved shares of Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, one hundred percent (100%) of the number of Warrant Shares that are issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 9). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and nonassessable. The Company will take all such action as may be necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed.

9. Certain Adjustments. At such time that the fixed Exercise Price has been established under this Warrant, the Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 9 as follows:.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding after the fixed Exercise Price has been established, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares, or (iii) combines its outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of

Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this Section 9(a) shall become effective immediately after the effective date of such subdivision or combination.

(b) Pro Rata Distributions. After the fixed Exercise Price has been established, if the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph), (iii) rights or warrants to subscribe for or purchase any security, or (iv) any other asset (in each case, "**Distributed Property**"), then, upon any exercise of this Warrant that occurs after the record date fixed for determination of stockholders entitled to receive such distribution, the Holder shall be entitled to receive, in addition to the Warrant Shares otherwise issuable upon such exercise (if applicable), the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Shares had the Holder been the record holder of such Warrant Shares immediately prior to such record date.

(c) Fundamental Transactions If, at any time while this Warrant is outstanding (i) the Company effects any merger or consolidation of the Company with or into another Person, in which the Company is not the survivor and the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least fifty percent (50%) of the voting securities of the surviving entity, (ii) the Company effects any sale of all or substantially all of its assets, or at least a majority of its Common Stock is acquired by a third party, in each case, in one or a series of related transactions, (iii) any tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which all or substantially all of the holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property, or (iv) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common

Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 9(a)) (in any such case, a "**Fundamental Transaction**"), then the Holder shall thereafter receive, upon exercise of this Warrant, in lieu of any Warrant Shares, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the "**Alternate Consideration**"). The Company shall not affect any such Fundamental Transaction unless prior to or simultaneously with the consummation thereof, any successor to the Company, surviving entity or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or entity shall assume the obligation to deliver to the Holder, such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to purchase and/or receive (as the case may be), and the other obligations under this Warrant. The provisions of this paragraph (c) shall similarly apply to subsequent transactions analogous to a Fundamental Transaction.

(d) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) and (e) of this Section, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(e) Calculations. All calculations under this Section 9 shall be made to the nearest cent or the nearest share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the sale or issuance of any such shares shall be considered an issue or sale of Common Stock.

(f) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 9, the Company at its expense will, at the written request of the Holder, promptly compute such adjustment, in good faith, in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder and to the Company's transfer agent.

(g) Notice of Corporate Events. If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then, except if such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall deliver to the Holder a notice describing the material terms and conditions of such transaction at least five Trading Days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction, and the Company will take all steps reasonably necessary in order to ensure that the Holder is given the practical opportunity to exercise this Warrant prior to such time so as to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice.

10. Payment of Exercise Price. The Holder shall pay the Exercise Price in immediately available funds; provided, however, that the Holder may, in its sole discretion, satisfy its obligation to pay the Exercise Price through a "cashless exercise," in which event the Company shall issue to the Holder the number of Warrant Shares determined as follows:

$$X = Y [(A-B)/A]$$

where:

X = the number of Warrant Shares to be issued to the Holder.

Y = the total number of Warrant Shares with respect to which this Warrant is being exercised in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

A = the average of the Closing Sale Prices of the shares of Common Stock (as reported by Bloomberg Financial Markets) for the five Trading Days ending on the date immediately preceding the Exercise Date.

B = the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

For purposes of this Warrant, "**Closing Sale Price**" means, for any security as of any date, the last trade price for such security on the principal trading market of the security, as reported by Bloomberg Financial Markets, or, if the principal trading market of the security begins to operate on an extended hours basis and does not designate the last trade price then the last trade price of such security prior to 4:00 p.m., New York City Time, as reported by Bloomberg, Financial Markets, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg Financial Markets, or, if no closing bid price is reported for such security by Bloomberg Financial Markets, the average of the bid prices and asked prices of any market makers for such security as reported in the "pink sheets" by OTC Markets Group Inc. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder in good faith. If the Company and the Holder are unable to agree upon the fair market value of such security, then the Company shall, within two business days submit via facsimile (a) the disputed determination of the Exercise Price to an independent, reputable investment bank selected by the Company and approved by the Holder (which approval shall not be unreasonably withheld, conditioned or delayed) or (b) the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause at its expense the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten business days from the time it receives the disputed determinations or calculations. Such investment bank's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

11. Beneficial Ownership.

a. Except as provided elsewhere in this Section 11(a) the Company shall not affect the exercise of this Warrant and the Holder shall not have the right to (a) exercise this Warrant into Warrant Shares but only to the extent that the number of Warrant Shares to be issued pursuant to such exercise

would result, when aggregated with all other shares of Common Stock beneficially owned by such Holder at such time, in such Holder beneficially owning more than 4.99% of all of the Common Stock issued and outstanding at such time (the "**4.99% Limitation**"); provided, however, that upon the Holder providing the Company with sixty one (61) days prior written notice (the "**4.99% Waiver Notice**") that such Holder is waiving this Section with regard to any or all Warrant Shares issuable upon exercise of this Warrant, this Section 11(a) shall be of no force or effect with regard to those Warrant Shares referenced in the 4.99% Waiver Notice.

b. Except as provided elsewhere in this Section 11(b) the Holder shall not have the right to exercise this Warrant into Warrant Shares but only to the extent that the number of Warrant Shares to be issued pursuant to such exercise would result, when aggregated with all other shares of Common Stock beneficially owned by such Holder at such time, in such Holder beneficially owning in excess of 9.99% of all of the shares of Common Stock issued and outstanding at such time (the "**9.99% Limitation**"); provided, however, that upon the Holder providing the Company with sixty one (61) days prior written notice (the "**9.99% Waiver Notice**") that the Holder is waiving this Section 11(b) with regard to any or all Warrant Shares issuable upon exercise of this Warrant, this Section 11(b) shall be of no force or effect with regard to those Common Stock referenced in the 9.99% Waiver Notice.

c. For purposes of this Section 11, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act taking into account the 4.99% Limitation and the 9.99% Limitation, as the case may be, and analogous provisions in and/or relevant to any other securities of the Company beneficially owned by the Holder. For purposes of this Warrant, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in the most recent of (i) the Company's most recent Form 10-K, Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission, as the case may be, (ii) a more recent public announcement by the Company or (iii) any other notice by the Company or the transfer agent setting forth the number of shares of Common Stock outstanding. For any reason at any time, upon the written or oral request of the Holder, the Company shall within two (2) business day confirm to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and its affiliates since the date as of which such number of outstanding shares of Common Stock was reported. For purposes of this Warrant, "**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

12. No Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares which would, otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the Closing Sale Price) for any such fractional shares.

13. Notices. All notices, requests, consents and other communications under this Warrant shall be in writing and shall be deemed to have been duly made when hand delivered, or mailed by express mail or private courier service: (i) if to the registered Holder of this Warrant, to the address of such Holder as shown on the Warrant Register, or (ii) if to the Company to the following address or to such other address as the Company may designate by notice to the Holder(s):

Jaguar Animal Health, Inc.
Attn: CFO
185 Berry Street — Suite 1300

San Francisco, CA 94107

14. Warrant Agent. The Company shall initially serve as warrant agent under this Warrant. Upon thirty days' notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged or any entity resulting from any consolidation to which the Company or any new warrant agent shall be a party or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or stockholders services business shall be a successor warrant agent under this Warrant without any further act. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

15. Restrictive Legends.

a. The Warrant Shares issuable upon exercise of this Warrant (unless registered under the Securities Act of 1933, as amended (the "**Securities Act**")) or eligible to be issued free of all restrictive legends in accordance with applicable state and federal securities laws and the terms and conditions of this Warrant, shall be stamped or imprinted with legends in substantially the following form:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED SOLELY FOR INVESTMENT AND THE OFFER AND SALE OF SUCH SHARES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY STATE SECURITIES LAWS. SUCH SHARES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH SALE, OFFER, PLEDGE OR HYPOTHECATION IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE ACT AND OF ANY APPLICABLE STATE SECURITIES LAWS. COPIES OF THE AGREEMENT COVERING THE PURCHASE OF THESE SHARES AND RESTRICTING THEIR TRANSFER MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDER OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF THE CORPORATION AT THE PRINCIPAL EXECUTIVE OFFICES OF THE CORPORATION.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FROM THE EFFECTIVE DATE OF THE CORPORATION'S FIRST UNDERWRITTEN PUBLIC OFFERING AS MORE FULLY PROVIDED IN THE WARRANT TO WHICH THESE SECURITIES WERE ISSUED.

b. The Company need not register a transfer of Warrant Shares bearing the restrictive legends set forth in this Section 15, unless the conditions specified in such legends are satisfied. The Company may also instruct its transfer agent not to register the transfer of the Warrant Shares, unless all of the conditions specified in the legends set forth in this Section 15 are satisfied.

16. **Market Standoff**. In connection with the IPO, and upon request of the Company or the underwriters managing such offering of the Company's securities, Holder (and any assignee) hereby agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed

180 days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the Company's initial public offering. In addition, upon request of the Company or the underwriters managing a public offering of the Company's securities (other than the initial public offering), Holder hereby agrees to be bound by similar restrictions, and to sign a similar agreement, in connection with no more than one additional registration statement filed within 12 months after the closing date of the initial public offering, provided that the duration of the lock-up period with respect to such additional registration shall not exceed 90 days from the effective date of such additional registration statement. Notwithstanding the foregoing, if during the last 17 days of the restricted period, the Company issues an earnings release or material news or a material event relating to the Company occurs, or prior to the expiration of the restricted period the Company announces that it will release earnings results during the 16-day period beginning on the last day of the restricted period, then, upon the request of the managing underwriter, to the extent required by any FINRA rules, the restrictions imposed by this subsection shall continue to apply until the end of the third trading day following the expiration of the 15-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event. In no event will the restricted period extend beyond 216 days after the effective date of the registration statement and in no event shall Holders lock-up period as provided herein be any longer than the shortest lock-up period agreed to by any other holder of Company securities. Except for compliance by Holder with respect to the first sentence of this Section 16 in connection with the IPO, whereby all officers, directors and holders of 1% or more of the issued and outstanding Common Stock likewise enter into identical agreements reflecting the provisions in such first sentence, notwithstanding anything to the contrary, provided herein, or elsewhere, this Section 16 shall only apply to the Warrant Shares if all other warrants and options of the Company whether currently outstanding or issued in the future either (x) contain the same provisions as set forth in this Section 16, and all officers, directors and holders of 1% or more of the issued and outstanding Common Stock and their affiliates (the "Lock-Up Persons") enter into identical provisions as to this Section 16 with respect to all shares of Common Stock owned beneficially and/or of record by all such persons and (y) the Lock-Up Persons enter into identical restrictions with respect to all shares of Common Stock owned beneficially and/or of record by all such Lock-Up Persons. In the event any and all of the Lock-Up Persons enter into such agreements or have identical provisions in their warrants and/or options, but any of such Lock-Up Persons are released in whole or in part from such agreement and/or provisions, then the provisions of this Section 16 shall be automatically terminated and null and void.

17. **Holder Representations & Warranties**. Holder hereby represents and warrants to the Company as follows:

a. Holder understands that no public market currently exists for the Warrant or Warrant Shares (collectively, the "Securities") and that there are no assurances that any such market will be created.

b. Holder specifically acknowledges and understands that certificates representing the Securities will bear substantially all of the legends set forth in this Warrant, in addition to any other legends required by this Warrant or otherwise.

c. Holder has full power and authority to deliver these representations and warranties in relation to the Holder's purchase of the Securities.

d. Holder is an "accredited" investor as that term is defined under Regulation D promulgated under the Securities Act of 1933, as amended, and neither Holder nor any person or entity with whom Holder shares beneficial ownership of the Company's securities, is subject to any of the "Bad Actor" disqualifications described in Rule

506(d)(1)(i) to (viii) under the Securities Act.

e. Holder acknowledges that the Company and is entitled to rely on the truth and accuracy of the foregoing representations and warranties and that the foregoing representations and warranties will survive Holder's admission as a Holder of the Company.

f. Holder represents and warrants that the above acknowledgements, representations and agreements are true and accurate as of the date hereof. Holder also agrees to inform the Company should any of the information contained in these representations and warranties cease to be true and/or accurate. Holder acknowledges that in the event it does not inform the Company of any change to the information contained in these representations and warranties, the Company and its respective professional advisers will be entitled to continue to rely on the truth and accuracy of the foregoing representations and warranties until and including the date the Holder purchases the Securities.

18. Miscellaneous.

(a) No Rights as a Stockholder. The Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 18(a), the Company shall provide the Holder with copies of the same notices and other information given to the stockholders of the Company, contemporaneously with the giving thereof to the stockholders.

(b) Successors and Assigns. Subject to compliance with applicable securities laws and the terms of this Warrant, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company except to a successor in interest and/or as otherwise required as a result of a Fundamental Transaction). This Warrant shall be binding on and inure to the benefit of the parties hereto and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant. Any attempted assignment in violation of this Section 18(b) shall be null and void.

(c) Amendment and Waiver. The Warrants, including this Warrant, may be amended, modified or supplemented, and waiver or consents to departures from the provisions of the Warrants may be given, if the Company and the holders of outstanding Warrants representing at least a majority of the shares of Common Stock purchasable under the outstanding Warrants consent to such amendment, modification, supplement, waiver or consent. Such consent may be effected by any available legal means, including without limitation at a special or regular meeting, by written consent or otherwise.

(d) Non-circumvention. The Company hereby covenants and agrees that the Company will not, by amendment of its corporate charter, bylaws or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities or any

other voluntary action, seek to avoid the observance or performance of any of the terms of this Warrant and will at all times in good faith carry out all the provisions of this Warrant. Without limiting the generality of the foregoing, the Company shall not increase the par value of any shares of Common Stock receivable upon exercise of this Warrant above the Exercise Price then in effect.

(e) Governing Law; Jurisdiction. This Warrant shall be governed by and construed solely and exclusively in accordance with the internal laws of the State of New York without regard to the conflicts of laws principles thereof. The parties hereto hereby expressly and irrevocably agree that any suit or proceeding arising directly and/or indirectly pursuant to or under this Warrant shall be brought solely in a federal or state court located in the City, County and State of New York. By its execution hereof, the parties hereby covenant and irrevocably submit to the in personam jurisdiction of the federal and state courts located in the City, County and State of New York and agree that any process in any such action may be served upon any of them personally, or by certified mail or registered mail upon them or their agent, return receipt requested, with the same full force and effect as if personally served upon them in New York City. The parties hereto expressly and irrevocably waive any claim that any such jurisdiction is not a convenient forum for any such suit or proceeding and any defense or lack of in personam jurisdiction with respect thereto. In the event of any such action or proceeding, the party prevailing therein shall be entitled to payment from the other party hereto of all of its reasonable counsel fees and disbursements.

(f) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(g) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the parties will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[Signature page follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

JAGUAR ANIMAL HEALTH, INC.

By: _____

Name: Lisa A. Conte
Title: President and Chief Executive Officer

ACCEPTED AND AGREED TO BY THE HOLDER

[ ]

By: _____
Its: _____

(Signature Page to Exchange Warrant to Purchase Common Stock)

EXHIBIT A

Form of Assignment [SUBJECT TO EXHIBIT C]

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Dated: ,

Holder's Signature: _____

Holder's Address: _____

EXHIBIT B

Form of Exercise Notice

(To be executed by the Holder to purchase shares of Common Stock
under the foregoing Warrant)

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. (the "**Warrant**") issued by Jaguar Animal Health, Inc., a Delaware corporation (the "**Company**"). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase Warrant Shares pursuant to the Warrant.

(3) The Holder shall pay the sum of $ in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares in accordance with the terms of the Warrant and, after delivery of such Warrant Shares, Warrant Shares remain subject to the Warrant.

The undersigned hereby represents and warrants that the aforesaid shares are being acquired for the account of the undersigned for investment and not with a view to, or for resale, in connection with the distribution thereof, and that the undersigned has no present intention of distributing or reselling such shares. In support thereof, the undersigned agrees to execute an Investment Representation Statement in a form substantially similar to the form attached to the Warrant as Exhibit C.

The undersigned hereby agrees that it shall not sell, offer, pledge, contract to sell, grant any option or contract to purchase, purchase any option or contract to sell, grant any right or warrant to purchase, lend or otherwise transfer or encumber, directly or indirectly, any securities of the Company as set forth in the Warrant.

Dated: _____

Name of
Holder: _____

By: _____

Name: _____

Title: _____

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

EXHIBIT C

INVESTMENT REPRESENTATION STATEMENT

PURCHASER :

COMPANY : JAGUAR ANIMAL HEALTH, INC.

SECURITY : COMMON STOCK ISSUED UPON EXERCISE OF THE WARRANT ISSUED ON [DECEMBER 3], 2014

AMOUNT : SHARES

DATE : , 20

In connection with the purchase of the above referenced shares (the "Securities"), the undersigned represents to the Company the following:

The undersigned is aware of the Company's business affairs and financial condition, and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. The undersigned is purchasing these Securities for its own account for investment purposes only and not with a view to, or for the resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933, as amended (the "**Securities Act**").

The undersigned understands that the offer and sale of the Securities have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the undersigned's investment intent as expressed herein. In this connection, the undersigned understands that, in the view of the Securities and Exchange Commission (the "**SEC**"), the statutory basis for such exemption may be unavailable if this representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future.

The undersigned further understands that the Securities must be held indefinitely unless the offer and sale of the Securities are subsequently registered under the Securities Act or unless an exemption from registration is otherwise available. Moreover, the undersigned understands that the Company is under no obligation to register the offer and sale of the Securities. In addition, the undersigned understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless the offer and sale of the Securities are registered or such registration is not required in the opinion of counsel for the Company.

The undersigned is familiar with the provisions of Rule 144, promulgated pursuant to the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions.

The Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires, among other things, the existence of a public market for the Securities, the availability of certain current public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sales being effected through a "broker's transaction" or in transactions directly with a "market maker" and the number of Securities

being sold during any three-month period not exceeding specified limitations.

The undersigned further understands that in the event that all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rule 144 is not exclusive, the Staff of the SEC has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk.

The undersigned hereby ratifies and confirms all of the original Holder's representations and warranties set forth in Section 17 of the Warrant, including but not limited to that the undersigned is an "Accredited Investor" as set forth in the Warrant and is not a "Bad Actor" as set forth in the Warrant and if the undersigned is not a United States person as defined by Section 7701(a)(30) of the Internal Revenue Code of 1986, as amended (the "**Code**")), Holder hereby represents that Holder has satisfied itself as to the full observance of the laws of its jurisdiction in connection with any invitation to subscribe for the Securities or any use of the Warrant, including (i) the legal requirements within its jurisdiction for the purchase of the Securities, (ii) any foreign exchange restrictions applicable to such purchase, (iii) any government or other consents that may need to be obtained in connection with such purchase, and (iv) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale or transfer of the Securities. Holder's purchase and payment for and continued beneficial ownership of the Warrant Stock will not violate any applicable securities or other laws of Holder's jurisdiction. Holder acknowledges that no representations or warranties, oral or written, have been made by the Company or any agent thereof in connection with Holder's exercise of this Warrant.

_____

(Signature)

Date: _____

THIS WARRANT AND ANY COMMON STOCK ISSUED UPON THE EXERCISE OF THIS WARRANT HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE OFFERED, SOLD, OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN APPLICABLE EXEMPTION THEREFROM, AS EVIDENCED BY A LEGAL OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY TO SUCH EFFECT. NOTWITHSTANDING THE FOREGOING, THIS WARRANT AND THE COMMON STOCK ISSUABLE UPON EXERCISE OF THIS WARRANT MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY SUCH SECURITIES.

JAGUAR ANIMAL HEALTH, INC.

FORM OF EXCHANGE WARRANT TO PURCHASE COMMON STOCK

Warrant No. Original Issue Date: December 3, 2014

JAGUAR ANIMAL HEALTH, INC., a Delaware corporation (the "**Company**"), hereby certifies that, for value received, [ ], or its permitted assigns (the "**Holder**"), is entitled to purchase from the Company that whole number of shares of common stock, par value $0.0001 per share (the "**Common Stock**") of the Company as determined by dividing $500,000 by the Exercise Price (as defined below) (each such share, a "**Warrant Share**" and all such shares, the "**Warrant Shares**") at an exercise price per share equal to the Exercise Price. This Warrant may be exercised at any time and from time to time commencing on the date six (6) months from December 3, 2014 (the "**Commencement Date**"), and through and including 5:00 P.M., New York City time, on the fifth anniversary of the Commencement Date (the "**Expiration Date**"), subject to the following terms and conditions:

This Warrant (this "**Warrant**") is one of two (2) substantially similar warrants originally issued to the Lenders pursuant to the Credit Agreement.

1. Definitions. All capitalized terms used in this Warrant but not otherwise defined in this Warrant shall have the meaning set forth in the Credit Agreement. In addition to the terms defined elsewhere in this Warrant, the following terms shall have the following meanings:

"**Credit Agreement**" means that Amended and Restated Standby Bridge Financing Agreement dated as of December 3, 2014, by and among, 31 Group, LLC, GPB Life Science Holdings LLC and Jaguar Animal Health, Inc.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

"**Exercise Price**" shall mean (i) if this Warrant is exercised in whole or in part by the Holder prior to the pricing of the shares of Common Stock being sold to the public in any initial public offering by the

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Company of its Common Stock (an "**IPO**"), solely as to those shares that the Holder is purchasing from the Company by exercising this Warrant during such period, the lowest of (a) eighty (80%) percent of the lowest gross price a share of Common Stock is sold in any Qualified Private Placement; and (b) if in any such Qualified Private Placement, the Company sells and/or issues securities of the Company that are exercisable, exchangeable and/or convertible into Common Stock ("**Common Stock Equivalents**"), 80% of the lowest (1) gross price that any Common Stock Equivalent is sold at; and (2) the gross price any Common Stock Equivalent is exercisable, convertible and/or exchangeable into a share of Common Stock, or into another Common Stock Equivalent, in both cases in this Section (i)(b)(2) the gross price is as of the closing date of each Qualified Private Placement in which any such Common Stock Equivalent is sold and/or issued (the lowest of (i)(a) and (b) shall be referred to herein as the "**Pre-IPO Exercise Price**"), and (ii) if this Warrant is exercised in whole or in part following an IPO, solely as to those shares that the Holder is purchasing from the Company by exercising this Warrant during such period, the lowest of (a) the Pre-IPO Exercise Price, and (b) eighty (80%) percent of the gross price a share of Common Stock is sold to the public in the IPO. The Exercise Price shall be in all cases further adjusted as provided elsewhere in this Warrant.

"**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

"**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

2. Registration of Warrant. The Company on the Closing Date shall register this Warrant, upon records to be maintained by the Company for that purpose (the "**Warrant Register**"), in the name of the record Holder (which shall include the initial Holder or, as the case may be, any registered assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company may deem and treat the registered Holder as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary. The initial address until changed as provided in this Warrant, shall be the address of the Holder provided in the Credit Agreement.

3. Transfers. The Company need not register a transfer of this Warrant unless the conditions specified in the legends on the front page hereof are satisfied and the transferee has agreed in writing to be subject to the terms and conditions of this Warrant, including transferee acknowledging in writing that it meets the investor suitability criteria set forth in this Warrant and Exhibit C attached hereto. The registered Holder of this Warrant agrees by his, her or its acceptance hereof, that neither this Warrant nor any Warrant Shares issued upon exercise of this Warrant shall be sold, transferred, assigned, pledged or hypothecated by any Person prior to the Commencement Date. On or after the Commencement Date, transfer of this Warrant may be made, subject to the restrictions on transfer set forth in this Warrant and compliance with all applicable securities laws and the Company shall register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, with the Form of Assignment (an "**Assignment**") attached as Exhibit A hereto duly completed and signed, to the Company at its address specified in Section 13. No ink original of any Assignment shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Assignment be required. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a "**New Warrant**") evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations of a Holder of a Warrant.

4. Exercise and Duration of Warrant.

(a) Subject to Holder executing and complying with Exhibit C and Section 17 below, all or any part of this Warrant shall be exercisable, in whole or in part, by the registered Holder at any time and from time to time on or after the Commencement Date and through and including 5:00 p.m., New York City time, on the Expiration Date. At 5:00 p.m., New York City time, on the Expiration Date, this Warrant shall be terminated and no longer outstanding; provided, however that, notwithstanding the foregoing, without any further action by or on behalf of the Holder, this Warrant shall automatically be deemed to be exercised in full pursuant to the net exercise provisions of Section 10 effective immediately prior to such termination.

(b) Subject to Holder executing and complying with Exhibit C and Section 17 below, the Holder may exercise this Warrant, not later than 5:00 p.m., New York City time, on any Business Day following the Original Issue Date and prior to the Expiration Date, by delivering to the Company (i) an exercise notice, in the form attached as Exhibit B hereto (the "**Exercise Notice**"), appropriately completed and duly signed, (ii) the Investment Representation Statement in the form attached as Exhibit C hereto, appropriately completed and duly signed, and (iii) payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a "cashless exercise" if so indicated in the Exercise Notice and if a "cashless exercise" may occur at such time pursuant to Section 10), and the date such items are delivered to the Company (as determined in accordance with the notice provisions hereof) is an "**Exercise Date**." If the Exercise Notice is received by the Company after 5:00 p.m., New York City time, on the specified Exercise Date, this Warrant will be deemed to be received and exercised on the Trading Day next succeeding the Exercise Date. The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares. No ink original of any Exercise Notice shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Exercise Notice be required.

5. Delivery of Warrant Shares.

(a) Subject to Section 11 below, upon exercise of this Warrant, the Company shall promptly (but in no event later than three Trading Days (as defined below) after the Exercise Date) issue or cause to be issued and cause to be delivered to or upon the written order of the Holder and in such name or names as the Holder may designate, a certificate for the Warrant Shares issuable upon such exercise.. The Holder, or any Person permissibly so designated by the Holder to receive Warrant Shares, shall be deemed to have become the holder of record of such Warrant Shares as of the Exercise Date. If the Warrant Shares are eligible to be issued free of all restrictive legends in accordance with applicable state and federal securities laws and the terms and conditions of this Warrant, in lieu of delivering physical certificates representing the Warrant Shares issuable upon exercise, provided the Company's transfer agent is participating in The Depository Trust Company's Fast Automated Securities Transfer program, upon the written request of the Holder, the Company shall use its commercially reasonable efforts to deliver, or cause to be delivered, Warrant Shares hereunder electronically through The Depository Trust Company or another established clearing corporation performing similar functions, if available. "**Trading Day**" means any day on which the shares of Common Stock are traded on the NASDAQ Stock Market, or, if the NASDAQ Stock Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock are then traded; *provided* that "Trading Day" shall not include any day on which the Common Stock are scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock are suspended from trading during the final hour of trading on such exchange or market

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(or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time).

(b) If by the close of the third Trading Day after delivery of a properly completed Exercise Notice (and any other documents required pursuant to Section 5(a)), the Company fails to deliver to the Holder the required number of Warrant Shares in the manner required pursuant to Section 5(a), and if on or after the Trading Day immediately following such third Trading Day and prior to the receipt of such Warrant Shares, the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "**Buy-In**"), then the Company shall, within three Trading Days after the Holder's request and in the Holder's sole discretion, either (i) pay in cash to the Holder an amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the "**Buy-In Price**"), at which point the Company's obligation to deliver such certificate (and to issue such Warrant Shares) shall terminate or (ii) promptly honor its obligation to deliver to the Holder Warrant Shares and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of Warrant Shares, times (B) the Closing Sales Price (as defined below) on the date of receipt of a properly completed Exercise Notice.

(c) To the extent permitted by law, the Company's obligations to issue and deliver Warrant Shares in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Nothing herein shall limit the Holder's right to pursue any other remedies available to the Holder hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver Common Stock upon exercise of this Warrant as required pursuant to the terms hereof.

6. Charges, Taxes and Expenses. Issuance and delivery of certificates for shares of Common Stock upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense in respect of the issuance of such certificates, all of which taxes and expenses shall be paid by the Company; provided, however, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares or Warrants in a name other than that of the Holder or an affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

7. Replacement of Warrant. If this Warrant is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable indemnity (which shall not include a surety bond), if requested. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to issue the New Warrant.

8. Reservation of Warrant Shares. The Company covenants that it will reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved shares of Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, one hundred percent (100%) of the number of Warrant Shares that are issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 9). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and nonassessable. The Company will take all such action as may be necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed.

9. Certain Adjustments. At such time that the fixed Exercise Price has been established under this Warrant, the Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 9 as follows:.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding after the fixed Exercise Price has been established, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares, or (iii) combines its outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this Section 9(a) shall become effective immediately after the effective date of such subdivision or combination.

(b) Pro Rata Distributions. After the fixed Exercise Price has been established, if the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph), (iii) rights or warrants to subscribe for or purchase any security, or (iv) any other asset (in each case, "**Distributed Property**"), then, upon any exercise of this Warrant that occurs after the record date fixed for determination of stockholders entitled to receive such distribution, the Holder shall be entitled to receive, in addition to the Warrant Shares otherwise issuable upon such exercise (if applicable), the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Shares had the Holder been the record holder of such Warrant Shares immediately prior to such record date.

(c) Fundamental Transactions If, at any time while this Warrant is outstanding (i) the Company effects any merger or consolidation of the Company with or into another Person, in which the Company is not the survivor and the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least fifty percent (50%) of the voting securities of the surviving entity, (ii) the Company effects any sale of all or substantially all of its assets, or at least a majority of its Common Stock is acquired by a third party, in each case, in one or a series of related transactions, (iii) any tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which all or substantially all of the holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property, or (iv) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common

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Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 9(a)) (in any such case, a "**Fundamental Transaction**"), then the Holder shall thereafter receive, upon exercise of this Warrant, in lieu of any Warrant Shares, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the "**Alternate Consideration**"). The Company shall not affect any such Fundamental Transaction unless prior to or simultaneously with the consummation thereof, any successor to the Company, surviving entity or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or entity shall assume the obligation to deliver to the Holder, such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to purchase and/or receive (as the case may be), and the other obligations under this Warrant. The provisions of this paragraph (c) shall similarly apply to subsequent transactions analogous to a Fundamental Transaction.

(d) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) and (e) of this Section, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(e) Calculations. All calculations under this Section 9 shall be made to the nearest cent or the nearest share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the sale or issuance of any such shares shall be considered an issue or sale of Common Stock.

(f) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 9, the Company at its expense will, at the written request of the Holder, promptly compute such adjustment, in good faith, in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder and to the Company's transfer agent.

(g) Notice of Corporate Events. If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then, except if such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall deliver to the Holder a notice describing the material terms and conditions of such transaction at least five Trading Days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction, and the Company will take all steps reasonably necessary in order to ensure that the Holder is given the practical opportunity to exercise this Warrant prior to such time so as to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice.

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10. Payment of Exercise Price. The Holder shall pay the Exercise Price in immediately available funds; provided, however, that the Holder may, in its sole discretion, satisfy its obligation to pay the Exercise Price through a "cashless exercise," in which event the Company shall issue to the Holder the number of Warrant Shares determined as follows:

$$X = Y [(A-B)/A]$$

where:

X = the number of Warrant Shares to be issued to the Holder.

Y = the total number of Warrant Shares with respect to which this Warrant is being exercised in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

A = the average of the Closing Sale Prices of the shares of Common Stock (as reported by Bloomberg Financial Markets) for the five Trading Days ending on the date immediately preceding the Exercise Date.

B = the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

For purposes of this Warrant, "**Closing Sale Price**" means, for any security as of any date, the last trade price for such security on the principal trading market of the security, as reported by Bloomberg Financial Markets, or, if the principal trading market of the security begins to operate on an extended hours basis and does not designate the last trade price then the last trade price of such security prior to 4:00 p.m., New York City Time, as reported by Bloomberg, Financial Markets, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg Financial Markets, or, if no closing bid price is reported for such security by Bloomberg Financial Markets, the average of the bid prices and asked prices of any market makers for such security as reported in the "pink sheets" by OTC Markets Group Inc. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder in good faith. If the Company and the Holder are unable to agree upon the fair market value of such security, then the Company shall, within two business days submit via facsimile (a) the disputed determination of the Exercise Price to an independent, reputable investment bank selected by the Company and approved by the Holder (which approval shall not be unreasonably withheld, conditioned or delayed) or (b) the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause at its expense the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten business days from the time it receives the disputed determinations or calculations. Such investment bank's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

11. Beneficial Ownership.

a. Except as provided elsewhere in this Section 11(a) the Company shall not affect the exercise of this Warrant and the Holder shall not have the right to (a) exercise this Warrant into Warrant Shares but only to the extent that the number of Warrant Shares to be issued pursuant to such exercise

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would result, when aggregated with all other shares of Common Stock beneficially owned by such Holder at such time, in such Holder beneficially owning more than 4.99% of all of the Common Stock issued and outstanding at such time (the "**4.99% Limitation**"); provided, however, that upon the Holder providing the Company with sixty one (61) days prior written notice (the "**4.99% Waiver Notice**") that such Holder is waiving this Section with regard to any or all Warrant Shares issuable upon exercise of this Warrant, this Section 11(a) shall be of no force or effect with regard to those Warrant Shares referenced in the 4.99% Waiver Notice.

b. Except as provided elsewhere in this Section 11(b) the Holder shall not have the right to exercise this Warrant into Warrant Shares but only to the extent that the number of Warrant Shares to be issued pursuant to such exercise would result, when aggregated with all other shares of Common Stock beneficially owned by such Holder at such time, in such Holder beneficially owning in excess of 9.99% of all of the shares of Common Stock issued and outstanding at such time (the "**9.99% Limitation**"); provided, however, that upon the Holder providing the Company with sixty one (61) days prior written notice (the "**9.99% Waiver Notice**") that the Holder is waiving this Section 11(b) with regard to any or all Warrant Shares issuable upon exercise of this Warrant, this Section 11(b) shall be of no force or effect with regard to those Common Stock referenced in the 9.99% Waiver Notice.

c. For purposes of this Section 11, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act taking into account the 4.99% Limitation and the 9.99% Limitation, as the case may be, and analogous provisions in and/or relevant to any other securities of the Company beneficially owned by the Holder. For purposes of this Warrant, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in the most recent of (i) the Company's most recent Form 10-K, Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission, as the case may be, (ii) a more recent public announcement by the Company or (iii) any other notice by the Company or the transfer agent setting forth the number of shares of Common Stock outstanding. For any reason at any time, upon the written or oral request of the Holder, the Company shall within two (2) business day confirm to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and its affiliates since the date as of which such number of outstanding shares of Common Stock was reported. For purposes of this Warrant, "**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

12. No Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares which would, otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the Closing Sale Price) for any such fractional shares.

13. Notices. All notices, requests, consents and other communications under this Warrant shall be in writing and shall be deemed to have been duly made when hand delivered, or mailed by express mail or private courier service: (i) if to the registered Holder of this Warrant, to the address of such Holder as shown on the Warrant Register, or (ii) if to the Company to the following address or to such other address as the Company may designate by notice to the Holder(s):

Jaguar Animal Health, Inc.

Attn: CFO
185 Berry Street — Suite 1300

San Francisco, CA 94107

14. Warrant Agent. The Company shall initially serve as warrant agent under this Warrant. Upon thirty days' notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged or any entity resulting from any consolidation to which the Company or any new warrant agent shall be a party or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or stockholders services business shall be a successor warrant agent under this Warrant without any further act. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

15. Restrictive Legends.

a. The Warrant Shares issuable upon exercise of this Warrant (unless registered under the Securities Act of 1933, as amended (the "**Securities Act**")) or eligible to be issued free of all restrictive legends in accordance with applicable state and federal securities laws and the terms and conditions of this Warrant, shall be stamped or imprinted with legends in substantially the following form:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED SOLELY FOR INVESTMENT AND THE OFFER AND SALE OF SUCH SHARES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY STATE SECURITIES LAWS. SUCH SHARES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH SALE, OFFER, PLEDGE OR HYPOTHECATION IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE ACT AND OF ANY APPLICABLE STATE SECURITIES LAWS. COPIES OF THE AGREEMENT COVERING THE PURCHASE OF THESE SHARES AND RESTRICTING THEIR TRANSFER MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDER OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF THE CORPORATION AT THE PRINCIPAL EXECUTIVE OFFICES OF THE CORPORATION.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FROM THE EFFECTIVE DATE OF THE CORPORATION'S FIRST UNDERWRITTEN PUBLIC OFFERING AS MORE FULLY PROVIDED IN THE WARRANT TO WHICH THESE SECURITIES WERE ISSUED.

b. The Company need not register a transfer of Warrant Shares bearing the restrictive legends set forth in this Section 15, unless the conditions specified in such legends are satisfied. The Company may also instruct its transfer agent not to register the transfer of the Warrant Shares, unless all of the conditions specified in the legends set forth in this Section 15 are satisfied.

16. **Market Standoff**. In connection with the IPO, and upon request of the Company or the underwriters managing such offering of the Company's securities, Holder (and any assignee) hereby agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed

180 days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the Company's initial public offering. In addition, upon request of the Company or the underwriters managing a public offering of the Company's securities (other than the initial public offering), Holder hereby agrees to be bound by similar restrictions, and to sign a similar agreement, in connection with no more than one additional registration statement filed within 12 months after the closing date of the initial public offering, provided that the duration of the lock-up period with respect to such additional registration shall not exceed 90 days from the effective date of such additional registration statement. Notwithstanding the foregoing, if during the last 17 days of the restricted period, the Company issues an earnings release or material news or a material event relating to the Company occurs, or prior to the expiration of the restricted period the Company announces that it will release earnings results during the 16-day period beginning on the last day of the restricted period, then, upon the request of the managing underwriter, to the extent required by any FINRA rules, the restrictions imposed by this subsection shall continue to apply until the end of the third trading day following the expiration of the 15-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event. In no event will the restricted period extend beyond 216 days after the effective date of the registration statement and in no event shall Holders lock-up period as provided herein be any longer than the shortest lock-up period agreed to by any other holder of Company securities. Except for compliance by Holder with respect to the first sentence of this Section 16 in connection with the IPO, whereby all officers, directors and holders of 1% or more of the issued and outstanding Common Stock likewise enter into identical agreements reflecting the provisions in such first sentence, notwithstanding anything to the contrary, provided herein, or elsewhere, this Section 16 shall only apply to the Warrant Shares if all other warrants and options of the Company whether currently outstanding or issued in the future either (x) contain the same provisions as set forth in this Section 16, and all officers, directors and holders of 1% or more of the issued and outstanding Common Stock and their affiliates (the "Lock-Up Persons") enter into identical provisions as to this Section 16 with respect to all shares of Common Stock owned beneficially and/or of record by all such persons and (y) the Lock-Up Persons enter into identical restrictions with respect to all shares of Common Stock owned beneficially and/or of record by all such Lock-Up Persons. In the event any and all of the Lock-Up Persons enter into such agreements or have identical provisions in their warrants and/or options, but any of such Lock-Up Persons are released in whole or in part from such agreement and/or provisions, then the provisions of this Section 16 shall be automatically terminated and null and void.

17. **Holder Representations & Warranties**. Holder hereby represents and warrants to the Company as follows:

a. Holder understands that no public market currently exists for the Warrant or Warrant Shares (collectively, the "Securities") and that there are no assurances that any such market will be created.

b. Holder specifically acknowledges and understands that certificates representing the Securities will bear substantially all of the legends set forth in this Warrant, in addition to any other legends required by this Warrant or otherwise.

c. Holder has full power and authority to deliver these representations and warranties in relation to the Holder's purchase of the Securities.

d. Holder is an "accredited" investor as that term is defined under Regulation D promulgated under the Securities Act of 1933, as amended, and neither Holder nor any person or entity with whom Holder shares beneficial ownership of the Company's securities, is subject to any of the "Bad Actor" disqualifications described in Rule

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506(d)(1)(i) to (viii) under the Securities Act.

e. Holder acknowledges that the Company and is entitled to rely on the truth and accuracy of the foregoing representations and warranties and that the foregoing representations and warranties will survive Holder's admission as a Holder of the Company.

f. Holder represents and warrants that the above acknowledgements, representations and agreements are true and accurate as of the date hereof. Holder also agrees to inform the Company should any of the information contained in these representations and warranties cease to be true and/or accurate. Holder acknowledges that in the event it does not inform the Company of any change to the information contained in these representations and warranties, the Company and its respective professional advisers will be entitled to continue to rely on the truth and accuracy of the foregoing representations and warranties until and including the date the Holder purchases the Securities.

18. Miscellaneous.

(a) No Rights as a Stockholder. The Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 18(a), the Company shall provide the Holder with copies of the same notices and other information given to the stockholders of the Company, contemporaneously with the giving thereof to the stockholders.

(b) Successors and Assigns. Subject to compliance with applicable securities laws and the terms of this Warrant, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company except to a successor in interest and/or as otherwise required as a result of a Fundamental Transaction). This Warrant shall be binding on and inure to the benefit of the parties hereto and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant. Any attempted assignment in violation of this Section 18(b) shall be null and void.

(c) Amendment and Waiver. The Warrants, including this Warrant, may be amended, modified or supplemented, and waiver or consents to departures from the provisions of the Warrants may be given, if the Company and the holders of outstanding Warrants representing at least a majority of the shares of Common Stock purchasable under the outstanding Warrants consent to such amendment, modification, supplement, waiver or consent. Such consent may be effected by any available legal means, including without limitation at a special or regular meeting, by written consent or otherwise.

(d) Non-circumvention. The Company hereby covenants and agrees that the Company will not, by amendment of its corporate charter, bylaws or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities or any

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other voluntary action, seek to avoid the observance or performance of any of the terms of this Warrant and will at all times in good faith carry out all the provisions of this Warrant. Without limiting the generality of the foregoing, the Company shall not increase the par value of any shares of Common Stock receivable upon exercise of this Warrant above the Exercise Price then in effect.

(e) Governing Law; Jurisdiction. This Warrant shall be governed by and construed solely and exclusively in accordance with the internal laws of the State of New York without regard to the conflicts of laws principles thereof. The parties hereto hereby expressly and irrevocably agree that any suit or proceeding arising directly and/or indirectly pursuant to or under this Warrant shall be brought solely in a federal or state court located in the City, County and State of New York. By its execution hereof, the parties hereby covenant and irrevocably submit to the in personam jurisdiction of the federal and state courts located in the City, County and State of New York and agree that any process in any such action may be served upon any of them personally, or by certified mail or registered mail upon them or their agent, return receipt requested, with the same full force and effect as if personally served upon them in New York City. The parties hereto expressly and irrevocably waive any claim that any such jurisdiction is not a convenient forum for any such suit or proceeding and any defense or lack of in personam jurisdiction with respect thereto. In the event of any such action or proceeding, the party prevailing therein shall be entitled to payment from the other party hereto of all of its reasonable counsel fees and disbursements.

(f) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(g) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the parties will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[Signature page follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

JAGUAR ANIMAL HEALTH, INC.

By: _____
Name: Lisa A. Conte
Title: President and Chief Executive Officer

ACCEPTED AND AGREED TO
BY THE HOLDER

[ ]

By: _____
Its: _____

(Signature Page to Exchange Warrant to Purchase Common Stock)

EXHIBIT A

Form of Assignment [SUBJECT TO EXHIBIT C]

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Dated: ,

Holder's Signature: _____

Holder's Address: _____

EXHIBIT B

Form of Exercise Notice

(To be executed by the Holder to purchase shares of Common Stock under the foregoing Warrant)

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. (the "**Warrant**") issued by Jaguar Animal Health, Inc., a Delaware corporation (the "**Company**"). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase Warrant Shares pursuant to the Warrant.

(3) The Holder shall pay the sum of $ in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares in accordance with the terms of the Warrant and, after delivery of such Warrant Shares, Warrant Shares remain subject to the Warrant.

The undersigned hereby represents and warrants that the aforesaid shares are being acquired for the account of the undersigned for investment and not with a view to, or for resale, in connection with the distribution thereof, and that the undersigned has no present intention of distributing or reselling such shares. In support thereof, the undersigned agrees to execute an Investment Representation Statement in a form substantially similar to the form attached to the Warrant as Exhibit C.

The undersigned hereby agrees that it shall not sell, offer, pledge, contract to sell, grant any option or contract to purchase, purchase any option or contract to sell, grant any right or warrant to purchase, lend or otherwise transfer or encumber, directly or indirectly, any securities of the Company as set forth in the Warrant.

Dated: _____

Name of
Holder: _____

By: _____

Name: _____

Title: _____

(Signature must conform in all respects to name of
Holder as specified on the face of the Warrant)

EXHIBIT C

INVESTMENT REPRESENTATION STATEMENT

PURCHASER :

COMPANY : JAGUAR ANIMAL HEALTH, INC.

SECURITY : COMMON STOCK ISSUED UPON EXERCISE OF THE WARRANT ISSUED ON [DECEMBER 3], 2014

AMOUNT : SHARES

DATE : , 20

In connection with the purchase of the above referenced shares (the "Securities"), the undersigned represents to the Company the following:

The undersigned is aware of the Company's business affairs and financial condition, and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. The undersigned is purchasing these Securities for its own account for investment purposes only and not with a view to, or for the resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933, as amended (the "**Securities Act**").

The undersigned understands that the offer and sale of the Securities have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the undersigned's investment intent as expressed herein. In this connection, the undersigned understands that, in the view of the Securities and Exchange Commission (the "**SEC**"), the statutory basis for such exemption may be unavailable if this representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future.

The undersigned further understands that the Securities must be held indefinitely unless the offer and sale of the Securities are subsequently registered under the Securities Act or unless an exemption from registration is otherwise available. Moreover, the undersigned understands that the Company is under no obligation to register the offer and sale of the Securities. In addition, the undersigned understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless the offer and sale of the Securities are registered or such registration is not required in the opinion of counsel for the Company.

The undersigned is familiar with the provisions of Rule 144, promulgated pursuant to the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions.

The Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires, among other things, the existence of a public market for the Securities, the availability of certain current public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sales being effected through a "broker's transaction" or in transactions directly with a "market maker" and the number of Securities

being sold during any three-month period not exceeding specified limitations.

The undersigned further understands that in the event that all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rule 144 is not exclusive, the Staff of the SEC has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk.

The undersigned hereby ratifies and confirms all of the original Holder's representations and warranties set forth in Section 17 of the Warrant, including but not limited to that the undersigned is an "Accredited Investor" as set forth in the Warrant and is not a "Bad Actor" as set forth in the Warrant and if the undersigned is not a United States person as defined by Section 7701(a)(30) of the Internal Revenue Code of 1986, as amended (the "**Code**")), Holder hereby represents that Holder has satisfied itself as to the full observance of the laws of its jurisdiction in connection with any invitation to subscribe for the Securities or any use of the Warrant, including (i) the legal requirements within its jurisdiction for the purchase of the Securities, (ii) any foreign exchange restrictions applicable to such purchase, (iii) any government or other consents that may need to be obtained in connection with such purchase, and (iv) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale or transfer of the Securities. Holder's purchase and payment for and continued beneficial ownership of the Warrant Stock will not violate any applicable securities or other laws of Holder's jurisdiction. Holder acknowledges that no representations or warranties, oral or written, have been made by the Company or any agent thereof in connection with Holder's exercise of this Warrant.

_____

(Signature)

Date: _____

Exhibit 10.33

Form of Representative's Warrant Agreement

THE REGISTERED HOLDER OF THIS PURCHASE WARRANT BY ITS ACCEPTANCE HEREOF, AGREES THAT IT WILL NOT SELL, TRANSFER OR ASSIGN THIS PURCHASE WARRANT EXCEPT AS HEREIN PROVIDED AND THE REGISTERED HOLDER OF THIS PURCHASE WARRANT AGREES THAT IT WILL NOT SELL, TRANSFER, ASSIGN, PLEDGE OR HYPOTHECATE THIS PURCHASE WARRANT FOR A PERIOD OF 180 DAYS FOLLOWING THE EFFECTIVE DATE OF THE REGISTRATION STATEMENT (DEFINED BELOW) TO ANYONE OTHER THAN (I) AEGIS CAPITAL CORP. OR AN UNDERWRITER OR A SELECTED DEALER IN CONNECTION WITH THE OFFERING, OR (II) A BONA FIDE OFFICER OR PARTNER OF AEGIS CAPITAL CORP. OR OF ANY SUCH UNDERWRITER OR SELECTED DEALER.

THIS PURCHASE WARRANT IS NOT EXERCISABLE PRIOR TO [·], 2016. VOID AFTER 5:00 P.M., EASTERN TIME, [·], 2020.

COMMON STOCK PURCHASE WARRANT

For the Purchase of [·] Shares of Common Stock

of

JAGUAR ANIMAL HEALTH, INC.

1. Purchase Warrant. THIS CERTIFIES THAT, in consideration of funds duly paid by or on behalf of [·] ("**Holder**"), as registered owner of this Purchase Warrant, to Jaguar Animal Health, Inc., a Delaware corporation (the "**Company**"), Holder is entitled, at any time or from time to time from [·], 2016 (the "**Commencement Date**"), and at or before 5:00 p.m., Eastern time, [·], 2020 (the "**Expiration Date**," which date shall not be more than five years from the effective date of the registration statement on form S-1 (Registration No. 333-198383) of the Company (the **"Registration Statement"**)), but not thereafter, to subscribe for, purchase and receive, in whole or in part, up to [·] shares of common stock of the Company, par value $0.01 per share (the "**Shares**"),(1) subject to adjustment as provided in Section 6 hereof. If the Expiration Date is a day on which banking institutions are authorized by law to close, then this Purchase Warrant may be exercised on the next succeeding day which is not such a day in accordance with the terms herein. During the period ending on the Expiration Date, the Company agrees not to take any action that would terminate the Purchase Warrant. This Purchase Warrant is initially exercisable at $[·] per Share (125% of the price of the Shares sold in the Offering); provided, however, that upon the occurrence of any of the events specified in Section 6 hereof, the rights granted by this Purchase Warrant, including the exercise price per Share and the number of Shares to be received upon such exercise, shall be adjusted as therein specified. The term "**Exercise Price**" shall mean the initial exercise price or the adjusted exercise price, depending on the context.

(1) The aggregate number of Shares subject to these purchase warrants shall equal 5% of the Shares sold in the Offering, excluding securities sold in the overallotment.

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2. Exercise.

2.1 Exercise Form. In order to exercise this Purchase Warrant, the exercise form attached hereto must be duly executed and completed and delivered to the Company, together with this Purchase Warrant and payment of the Exercise Price for the Shares being purchased payable in cash by wire transfer of immediately available funds to an account designated by the Company or by certified check or official bank check. If the subscription rights represented hereby shall not be exercised at or before 5:00 p.m., Eastern time, on the Expiration Date, this Purchase Warrant shall become and be void without further force or effect, and all rights represented hereby shall cease and expire.

2.2 Cashless Exercise. If at any time after the Commencement Date there is no effective registration statement registering, or no current prospectus available for, the resale of the Shares by the Holder, then in lieu of exercising this Purchase Warrant by payment of cash or check payable to the order of the Company pursuant to Section 2.1 above, Holder may elect to receive the number of Shares equal to the value of this Purchase Warrant (or the portion thereof being exercised), by surrender of this Purchase Warrant to the Company, together with the exercise form attached hereto, in which event the Company shall issue to Holder, Shares in accordance with the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where,	X	=	The number of Shares to be issued to Holder;
	Y	=	The number of Shares for which the Purchase Warrant is being exercised;
	A	=	The fair market value of one Share; and
	B	=	The Exercise Price.

For purposes of this Section 2.2, the fair market value of a Share is defined as follows:

(i) if the Company's common stock is traded on a securities exchange, the value shall be deemed to be the closing price on such exchange prior to the exercise form being submitted in connection with the exercise of the Purchase Warrant; or

(ii) if the Company's common stock is actively traded over-the-counter, the value shall be deemed to be the closing bid price prior to the exercise form being submitted in connection with the exercise of the Purchase Warrant; if there is no active public market, the value shall be the fair market value thereof, as determined in good faith by the Company's Board of Directors.

2.3 Legend. Each certificate for the securities purchased under this Purchase Warrant shall bear a legend as follows unless such securities have been registered under the Securities Act of 1933, as amended (the "**Act**"):

> "The securities represented by this certificate have not been registered under the Securities Act of 1933, as amended (the "**Act**"), or applicable state law. Neither the securities nor any interest therein may be offered for sale, sold or otherwise transferred except pursuant to an effective registration statement under the Act, or pursuant to an exemption from registration under the Act and applicable state law which, in the opinion of counsel to the Company, is available."

3. Transfer.

3.1 General Restrictions. The registered Holder of this Purchase Warrant agrees by his, her or its acceptance hereof, that such Holder will not: (a) sell, transfer, assign, pledge or hypothecate this Purchase Warrant for a period of 180 days following the effective date of the Registration Statement to anyone other than: (i) Aegis Capital Corp. ("**Aegis**") or an underwriter or a selected dealer participating in the Offering, or (ii) a bona fide officer or partner of Aegis or of any such underwriter or selected dealer, in each case in accordance with FINRA Conduct Rule 5110(g)(1), or (b) cause this Purchase Warrant or the securities issuable hereunder to be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of this Purchase Warrant or the securities hereunder, except as provided for in FINRA Rule 5110(g)(2). On and after that

date that is 180 days after the effective date of the Registration Statement, transfers to others may be made subject to compliance with or exemptions from applicable securities laws. In order to make any permitted assignment, the Holder must deliver to the Company the assignment form attached hereto duly executed and completed, together with the Purchase Warrant and payment of all transfer taxes, if any, payable in connection therewith. The Company shall within five (5) Business Days transfer this Purchase Warrant on the books of the Company and shall execute and deliver a new Purchase Warrant or Purchase Warrants of like tenor to the appropriate assignee(s) expressly evidencing the right to purchase the aggregate number of Shares purchasable hereunder or such portion of such number as shall be contemplated by any such assignment.

3.2 Restrictions Imposed by the Act. The securities evidenced by this Purchase Warrant shall not be transferred unless and until: (i) the Company has received the opinion of counsel for the Holder that the securities may be transferred pursuant to an exemption from registration under the Act and applicable state securities laws, the availability of which is established to the reasonable satisfaction of the Company, or (ii) a registration statement or a post-effective amendment to the Registration Statement relating to the offer and sale of such securities has been filed by the Company and declared effective by the U.S. Securities and Exchange Commission (the "**Commission**") and compliance with applicable state securities law has been established.

4. Registration Rights.

4.1 Demand Registration.

4.1.1 Grant of Right. The Company, upon written demand (a "**Demand Notice**") of the Holder(s) of at least 51% of the Purchase Warrants and/or the underlying Shares ("**Majority Holders**"), agrees to register, on one occasion, all or any portion of the Shares underlying the Purchase Warrants (collectively, the "**Registrable Securities**"). On such occasion, the Company will file a registration statement with the Commission covering the Registrable Securities within sixty (60) days after receipt of a Demand Notice and use its reasonable best efforts to have the registration statement declared effective promptly thereafter, subject to compliance with review by the Commission; provided, however, that the Company shall not be required to comply with a Demand Notice if the Company has filed a registration statement with respect to which the Holder is entitled to piggyback registration rights pursuant to Section 4.2 hereof and either: (i) the Holder has elected to participate in the offering covered by such registration statement or (ii) if such registration statement relates to an underwritten primary offering of securities of the Company, until the offering covered by such registration statement has been withdrawn or until thirty (30) days after such offering is consummated. The demand for registration may be made at any time during a period of four (4) years beginning one year after the effective date of the Registration Statement. The Company covenants and agrees to give written notice of its receipt of any Demand Notice by any Holder(s) to all other registered Holders of the Purchase Warrants and/or the Registrable Securities within ten (10) days after the date of the receipt of any such Demand Notice.

4.1.2 Terms. The Company shall bear all fees and expenses attendant to the registration of the Registrable Securities pursuant to Section 4.1.1, but the Holders shall pay any and all underwriting commissions and the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities. The Company agrees to use its reasonable best efforts to cause the filing required herein to become effective promptly and to qualify or register the Registrable Securities in such States as are reasonably requested by the Holder(s); provided, however, that in no event shall the Company be required to register the Registrable Securities in a State in which such registration would cause: (i) the Company to be obligated to register or license to do business in such State or submit to general service of process in such State, or (ii) the principal shareholders of the Company to be obligated to escrow their shares of capital stock of the Company. The Company shall cause any registration statement filed pursuant to the demand right granted under Section 4.1.1 to remain effective for a period of at least twelve (12) consecutive months after the date that the Holders of the Registrable Securities covered by such registration statement are first given the opportunity to sell all of such securities. The Holders shall only use the prospectuses provided by the Company to sell the shares covered by such registration statement, and will immediately cease to use any prospectus furnished by the Company if the Company advises the Holder that such prospectus may no longer be used due to a material misstatement or omission. Notwithstanding the provisions of this Section 4.1.2, the Holder shall be entitled to a demand registration under this Section 4.1.2 on only one (1) occasion and such demand registration right shall terminate on the fifth anniversary of the effective date of the Registration Statement in accordance with FINRA Rule 5110(f)(2)(G)(iv).

4.2 "Piggy-Back" Registration.

4.2.1 Grant of Right. In addition to the demand right of registration described in Section 4.1 hereof, the Holder shall have the right, for a period of six (6) years commencing one year after the effective date of the Registration Statement, to include the Registrable Securities as part of any other registration of securities filed by the Company (other than in connection with a transaction contemplated by Rule 145 promulgated under the Act or pursuant to Form S-8 or any equivalent form); provided, however, that if, solely in connection with any primary underwritten public offering for the account of the Company, the managing underwriter(s) thereof shall, in its reasonable discretion, impose a limitation on the number of shares of Common Stock which may be included in the Registration Statement because, in such underwriter(s)' judgment, marketing or other factors dictate such limitation is necessary to facilitate public distribution, then the Company shall be obligated to include in such Registration Statement only such limited portion of the Registrable Securities with respect to which the Holder requested inclusion hereunder as the underwriter shall reasonably permit. Any exclusion of Registrable Securities shall be made pro rata among the Holders seeking to include Registrable Securities in proportion to the number of Registrable Securities sought to be included by such Holders; provided, however, that the Company shall not exclude any Registrable Securities unless the Company has first excluded all outstanding securities, the holders of which are not entitled to inclusion of such securities in such Registration Statement or are not entitled to pro rata inclusion with the Registrable Securities.

4.2.2 Terms. The Company shall bear all fees and expenses attendant to registering the Registrable Securities pursuant to Section 4.2.1 hereof, but the Holders shall pay any and all underwriting commissions and the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities. In the event of such a proposed registration, the Company shall furnish the then Holders of outstanding

Registrable Securities with not less than thirty (30) days written notice prior to the proposed date of filing of such registration statement. Such notice to the Holders shall continue to be given for each registration statement filed by the Company until such time as all of the Registrable Securities have been sold by the Holder. The holders of the Registrable Securities shall exercise the "piggy-back" rights provided for herein by giving written notice, within ten (10) days of the receipt of the Company's notice of its intention to file a registration statement. Except as otherwise provided in this Purchase Warrant, there shall be no limit on the number of times the Holder may request registration under this Section 4.2.2; provided, however, that such registration rights shall terminate on the seventh anniversary of the effective date of the Registration Statement.

4.3 General Terms.

4.3.1 Indemnification. The Company shall indemnify the Holder(s) of the Registrable Securities to be sold pursuant to any registration statement hereunder and each person, if any, who controls such Holders within the meaning of Section 15 of the Act or Section 20(a) of the Securities Exchange Act of 1934, as amended ("**Exchange Act**"), against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against any claim whatsoever) to which any of them may become subject under the Act, the Exchange Act or otherwise, arising from such registration statement but only to the same extent and with the same effect as the provisions pursuant to which the Company has agreed to indemnify the Underwriters contained in Section 5.1 of the Underwriting Agreement between the Underwriters and the Company, dated as of [·], 2015. The Holder(s) of the Registrable Securities to be sold pursuant to such registration statement, and their successors and assigns, shall severally, and not jointly, indemnify the Company, against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against any claim whatsoever) to which they may become subject under the Act, the Exchange Act or otherwise, arising from information furnished by or on behalf of such Holders, or their successors or assigns, in writing, for specific inclusion in such registration statement to the same extent and with the same effect as the provisions contained in Section 5.2 of the Underwriting Agreement pursuant to which the Underwriters have agreed to indemnify the Company.

4.3.2 Exercise of Purchase Warrants. Nothing contained in this Purchase Warrant shall be construed as requiring the Holder(s) to exercise their Purchase Warrants prior to or after the initial filing of any registration statement or the effectiveness thereof.

4.3.3 Documents Delivered to Holders. The Company shall furnish to each Holder participating in any of the foregoing offerings and to each underwriter of any such offering, if any, a signed counterpart, addressed to such Holder or underwriter, of: (i) an opinion of counsel to the Company, dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, an opinion dated the date of the closing under any underwriting agreement related thereto), and (ii) a "cold comfort" letter dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, a letter dated the date of the closing under the underwriting agreement) signed by the independent registered public accounting firm which has issued a report on the Company's financial statements included in such registration statement, in each case covering substantially the same matters with respect to such registration statement (and the prospectus included therein) and, in the case of such accountants' letter, with respect to events subsequent to the date of such financial statements, as are customarily covered in opinions of issuer's counsel and in accountants' letters delivered to underwriters in underwritten public offerings of securities. The Company shall also deliver promptly to each Holder participating in the offering requesting the correspondence and memoranda described below and to the managing underwriter, if any, copies of all correspondence between the Commission and the Company, its counsel or auditors and all memoranda relating to discussions with the Commission or its staff with respect to the registration statement and permit each Holder and underwriter to do such investigation, upon reasonable advance notice, with respect to information contained in or omitted from the registration statement as it deems reasonably necessary to comply with applicable securities laws or rules of FINRA. Such investigation shall include access to books, records and properties and opportunities to discuss the business of the Company with its officers and independent auditors, all to such reasonable extent and at such reasonable times as any such Holder shall reasonably request.

4.3.4 Underwriting Agreement. The Company shall enter into an underwriting agreement with the managing underwriter(s), if any, selected by any Holders whose Registrable Securities are being registered pursuant to this Section 4, which managing underwriter shall be reasonably satisfactory to the Company. Such agreement shall be reasonably satisfactory in form and substance to the Company, each Holder and such managing underwriters, and shall contain such representations, warranties and covenants by the Company and such other terms as are customarily contained in agreements of that type used by the managing underwriter. The Holders shall be parties to any underwriting agreement relating to an underwritten sale of their Registrable Securities and may, at their option, require that any or all the representations, warranties and covenants of the Company to or for the benefit of such underwriters shall also be made to and for the benefit of such Holders. Such Holders shall not be required to make any representations or warranties to or agreements with the Company or the underwriters except as they may relate to such Holders, their Shares and their intended methods of distribution.

4.3.5 Documents to be Delivered by Holder(s). Each of the Holder(s) participating in any of the foregoing offerings shall furnish to the Company a completed and executed questionnaire provided by the Company requesting information customarily sought of selling security holders.

4.3.6 Damages. Should the registration or the effectiveness thereof required by Section 4.1 and Section 4.2 hereof be delayed by the Company or the Company otherwise fails to comply with such provisions, the Holder(s) shall, in addition to any other legal or other relief available to the Holder(s), be entitled to obtain specific performance or other equitable (including injunctive) relief against the threatened breach of such provisions or the continuation of any such breach, without the necessity of proving actual damages and without the necessity of posting bond or other security.

5. New Purchase Warrants to be Issued.

5.1 Partial Exercise or Transfer. Subject to the restrictions in Section 3 hereof, this Purchase Warrant may be exercised or assigned in whole or in part. In the event of the exercise or assignment hereof in part only, upon surrender of this Purchase Warrant for cancellation, together with the duly executed exercise or assignment form and funds sufficient to pay any Exercise Price and/or transfer tax if exercised pursuant to Section 2.1 hereof, the Company shall cause to be delivered to the Holder without charge a new Purchase Warrant of like tenor to this Purchase Warrant in the name of the Holder evidencing the right of the Holder to purchase the number of Shares purchasable hereunder as to which this Purchase Warrant has not been exercised or assigned.

5.2 Lost Certificate. Upon receipt by the Company of evidence satisfactory to it of the loss, theft,

destruction or mutilation of this Purchase Warrant and of reasonably satisfactory indemnification or the posting of a bond, the Company shall execute and deliver a new Purchase Warrant of like tenor and date. Any such new Purchase Warrant executed and delivered as a result of such loss, theft, mutilation or destruction shall

constitute a substitute contractual obligation on the part of the Company.

6. Adjustments.

6.1 Adjustments to Exercise Price and Number of Securities. The Exercise Price and the number of Shares underlying the Purchase Warrant shall be subject to adjustment from time to time as hereinafter set forth:

6.1.1 Share Dividends; Split Ups. If, after the date hereof, and subject to the provisions of Section 6.3 below, the number of outstanding Shares is increased by a stock dividend payable in Shares or by a split up of Shares or other similar event, then, on the effective day thereof, the number of Shares purchasable hereunder shall be increased in proportion to such increase in outstanding shares, and the Exercise Price shall be proportionately decreased.

6.1.2 Aggregation of Shares. If, after the date hereof, and subject to the provisions of Section 6.3 below, the number of outstanding Shares is decreased by a consolidation, combination or reclassification of Shares or other similar event, then, on the effective date thereof, the number of Shares purchasable hereunder shall be decreased in proportion to such decrease in outstanding shares, and the Exercise Price shall be proportionately increased.

6.1.3 Replacement of Securities upon Reorganization, etc. In case of any reclassification or reorganization of the outstanding Shares other than a change covered by Section 6.1.1 or Section 6.1.2 hereof or that solely affects the par value of such Shares, or in the case of any share reconstruction or amalgamation or consolidation of the Company with or into another corporation (other than a consolidation or share reconstruction or amalgamation in which the Company is the continuing corporation and that does not result in any reclassification or reorganization of the outstanding Shares), or in the case of any sale or conveyance to another corporation or entity of the property of the Company as an entirety or substantially as an entirety in connection with which the Company is dissolved, the Holder of this Purchase Warrant shall have the right thereafter (until the expiration of the right of exercise of this Purchase Warrant) to receive upon the exercise hereof, for the same aggregate Exercise Price payable hereunder immediately prior to such event, the kind and amount of shares of stock or other securities or property (including cash) receivable upon such reclassification, reorganization, share reconstruction or amalgamation, or consolidation, or upon a dissolution following any such sale or transfer, by a Holder of the number of Shares of the Company obtainable upon exercise of this Purchase Warrant immediately prior to such event; and if any reclassification also results in a change in Shares covered by Section 6.1.1 or Section 6.1.2, then such adjustment shall be made pursuant to Section 6.1.1, Section 6.1.2 and this Section 6.1.3. The provisions of this Section 6.1.3 shall similarly apply to successive reclassifications, reorganizations, share reconstructions or amalgamations, or consolidations, sales or other transfers.

6.1.4 Changes in Form of Purchase Warrant. This form of Purchase Warrant need not be changed because of any change pursuant to this Section 6.1, and Purchase Warrants issued after such change may state the same Exercise Price and the same number of Shares as are stated in the Purchase Warrants initially issued pursuant to this Agreement. The acceptance by any Holder of the issuance of new Purchase Warrants reflecting a required or permissive change shall not be deemed to waive any rights to an adjustment occurring after the Commencement Date or the computation thereof.

6.2 Substitute Purchase Warrant. In case of any consolidation of the Company with, or share reconstruction or amalgamation of the Company with or into, another corporation (other than a consolidation or share reconstruction or amalgamation which does not result in any reclassification or change of the outstanding Shares), the corporation formed by such consolidation or share reconstruction or amalgamation shall execute and deliver to the Holder a supplemental Purchase Warrant providing that the holder of each Purchase Warrant then outstanding or to be outstanding shall have the right thereafter (until the stated expiration of such Purchase Warrant) to receive, upon exercise of such Purchase Warrant, the kind and amount of shares of stock and other securities and property receivable upon such consolidation or share reconstruction or amalgamation, by a holder of the number of Shares of the Company for which such Purchase Warrant might have been exercised immediately prior to such

consolidation, share reconstruction or amalgamation, sale or transfer. Such supplemental Purchase Warrant shall provide for adjustments which shall be identical to the adjustments provided for in this Section 6. The above provision of this Section 6 shall similarly apply to successive consolidations or share reconstructions or amalgamations.

6.3 Elimination of Fractional Interests. The Company shall not be required to issue certificates representing fractions of Shares upon the exercise of the Purchase Warrant, nor shall it be required to issue scrip or pay cash in lieu of any fractional interests, it being the intent of the parties that all fractional interests shall be eliminated by rounding any fraction up or down, as the case may be, to the nearest whole number of Shares or other securities, properties or rights.

7. Reservation and Listing. The Company shall at all times reserve and keep available out of its authorized Shares, solely for the purpose of issuance upon exercise of the Purchase Warrants, such number of Shares or other securities, properties or rights as shall be issuable upon the exercise thereof. The Company covenants and agrees that, upon exercise of the Purchase Warrants and payment of the Exercise Price therefor, in accordance with the terms hereby, all Shares and other securities issuable upon such exercise shall be duly and validly issued, fully paid and non-assessable and not subject to preemptive rights of any shareholder. The Company further covenants and agrees that upon exercise of the Purchase Warrants and payment of the exercise price therefor, all Shares and other securities issuable upon such exercise shall be duly and validly issued, fully paid and non-assessable and not subject to preemptive rights of any shareholder. As long as the Purchase Warrants shall be outstanding, the Company shall use its commercially reasonable efforts to cause all Shares issuable upon exercise of the Purchase Warrants to be listed (subject to official notice of issuance) on all national securities exchanges (or, if applicable, on the OTC Bulletin Board or any successor trading market) on which the Shares issued to the public in the Offering may then be listed and/or quoted.

8. Certain Notice Requirements.

8.1 Holder's Right to Receive Notice. Nothing herein shall be construed as conferring upon the Holders the right to vote or consent or to receive notice as a shareholder for the election of directors or any other matter, or as having any rights whatsoever as a shareholder of the Company. If, however, at any time prior to the expiration of the Purchase Warrants and their exercise, any of the events described in Section 8.2 shall occur, then, in one or more of said events, the Company shall give written notice of such event at least fifteen days prior to the date fixed as a record date or the date of closing the transfer books (the "**Notice Date**") for the determination of the shareholders entitled to such dividend, distribution, conversion or exchange of securities or subscription rights, or entitled to vote on such proposed dissolution, liquidation, winding up or sale. Such notice shall specify such record date or the date of the closing of the transfer books, as the case may be. Notwithstanding the foregoing, the Company shall deliver to each Holder a copy of each notice given to the other shareholders of the Company at the same time and in the same manner that such notice is given to the shareholders.

8.2 Events Requiring Notice. The Company shall be required to give the notice described in this Section 8 upon one or more of the following events: (i) if the Company shall take a record of the holders of its Shares for the purpose of entitling them to receive a dividend or distribution payable otherwise than in cash, or a cash dividend or distribution payable otherwise than out of retained earnings, as indicated by the accounting treatment of such dividend or distribution on the books of the Company, (ii) the Company shall offer to all the holders of its Shares any additional shares of capital stock of the Company or securities convertible into or exchangeable for shares of capital stock of the Company, or any option, right or warrant to subscribe therefor, or (iii) a dissolution, liquidation

or winding up of the Company (other than in connection with a consolidation or share reconstruction or amalgamation) or a sale of all or substantially all of its property, assets and business shall be proposed.

8.3 Notice of Change in Exercise Price. The Company shall, promptly after an event requiring a change in the Exercise Price pursuant to Section 6 hereof, send notice to the Holders of such event and change ("**Price Notice**"). The Price Notice shall describe the event causing the change and the method of calculating same and shall be certified as being true and accurate by the Company's Chief Financial Officer.

8.4 Transmittal of Notices. All notices, requests, consents and other communications under this

Purchase Warrant shall be in writing and shall be deemed to have been duly made (1) when hand delivered, (2) when mailed by express mail or private courier service or (3) when the event requiring notice is disclosed in all material respects and filed in a current report on Form 8-K or in a definitive proxy statement on Schedule 14A prior to the Notice Date: (i) if to the registered Holder of the Purchase Warrant, to the address of such Holder as shown on the books of the Company, or (ii) if to the Company, to following address or to such other address as the Company may designate by notice to the Holders:

If to the Holder:

Aegis Capital Corp.
810 Seventh Avenue, 11th Floor
New York, New York 10019
Attn: Mr. David Bocchi, Managing Director of
Investment Banking
Fax No.: (212) 813-1047

With a copy (which shall not constitute notice) to:

Blank Rome LLP
405 Lexington Avenue
New York, NY 10174
Attn: Brad Shiffman, Esq.
Fax: (917) 332-3725

If to the Company:

Jaguar Animal Health, Inc.
185 Berry Street, Suite 1300
San Francisco, CA 94107
Attention: Lisa A. Conte
Fax No: (415) 371-8311

with a copy (which shall not constitute notice) to:

Reed Smith LLP
101 Second Street, Suite 1800
San Francisco, CA 94105
Attention: Donald C. Reinke
Fax No: (415) 391-8269

9. Miscellaneous.

9.1 Amendments. The Company and Aegis may from time to time supplement or amend this Purchase Warrant without the approval of any of the Holders in order to cure any ambiguity, to correct or supplement any provision contained herein that may be defective or inconsistent with any other provisions herein, or to make any other provisions in regard to matters or questions arising hereunder that the Company and Aegis may deem necessary or desirable and that the Company and Aegis deem shall not adversely affect the interest of the Holders. All other modifications or amendments shall require the written consent of and be signed by the party against whom enforcement of the modification or amendment is sought.

9.2 Headings. The headings contained herein are for the sole purpose of convenience of reference, and shall not in any way limit or affect the meaning or interpretation of any of the terms or provisions of this Purchase Warrant.

9.3. Entire Agreement. This Purchase Warrant (together with the other agreements and documents being delivered pursuant to or in connection with this Purchase Warrant) constitutes the entire agreement of the parties hereto with respect to the subject matter hereof, and supersedes all prior agreements and understandings of the parties, oral and written, with respect to the subject matter hereof.

9.4 Binding Effect. This Purchase Warrant shall inure solely to the benefit of and shall be binding upon, the Holder and the Company and their permitted assignees, respective successors, legal representative and assigns, and no other person shall have or be construed to have any legal or equitable right, remedy or claim under or in respect of or by virtue of this Purchase Warrant or any provisions herein contained.

9.5 Governing Law; Submission to Jurisdiction. This Purchase Warrant shall be governed by and construed and enforced in accordance with the laws of the State of Delaware, without giving effect to conflict of laws principles thereof. The Company hereby agrees that any action, proceeding or claim against it arising out of, or relating in any way to this Purchase Warrant shall be brought and enforced in the New York Supreme Court, County of New York, or in the

United States District Court for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum. Any process or summons to be served upon the Company may be served by transmitting a copy thereof by registered or certified mail, return receipt requested, postage prepaid, addressed to it at the address set forth in Section 8 hereof. Such mailing shall be deemed personal service and shall be legal and binding upon the Company in any action, proceeding or claim. The Company and the Holder agree that the prevailing party(ies) in any such action shall be entitled to recover from the other party(ies) all of its reasonable attorneys' fees and expenses relating to such action or proceeding and/or incurred in connection with the preparation therefor. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and the Holder hereby irrevocably waive, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this agreement or the transactions contemplated hereby.

9.6 Waiver, etc. The failure of the Company or the Holder to at any time enforce any of the provisions of this Purchase Warrant shall not be deemed or construed to be a waiver of any such provision, nor to in any way affect the validity of this Purchase Warrant or any provision hereof or the right of the Company or any Holder to thereafter enforce each and every provision of this Purchase Warrant. No waiver of any breach, non-compliance or non-fulfillment of any of the provisions of this Purchase Warrant shall be effective unless set forth in a written instrument executed by the party or parties against whom or which enforcement of such waiver is sought; and no waiver of any such breach, non-compliance or non-fulfillment shall be construed or deemed to be a waiver of any other or subsequent breach, non-compliance or non-fulfillment.

9.7 Execution in Counterparts. This Purchase Warrant may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute one and the same agreement, and shall become effective when one or more counterparts has been signed by each of the parties hereto and delivered to each of the other parties hereto. Such counterparts may be delivered by facsimile transmission or other electronic transmission.

9.8 Exchange Agreement. As a condition of the Holder's receipt and acceptance of this Purchase Warrant, Holder agrees that, at any time prior to the complete exercise of this Purchase Warrant by Holder, if the Company and Aegis enter into an agreement ("**Exchange Agreement**") pursuant to which they agree that all outstanding Purchase Warrants will be exchanged for securities or cash or a combination of both, then Holder shall agree to such exchange and become a party to the Exchange Agreement.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the Company has caused this Purchase Warrant to be signed by its duly authorized officer as of the day of , 2015.

JAGUAR ANIMAL HEALTH, INC.

By: _____
Name:
Title:

Form to be used to exercise Purchase Warrant:

Date: , 20

The undersigned hereby elects irrevocably to exercise the Purchase Warrant for Shares of Jaguar Animal Health, Inc., a Delaware corporation (the "**Company**") and hereby makes payment of $ (at the rate of $ per Share) in payment of the Exercise Price pursuant thereto. Please issue the Shares as to which this Purchase Warrant is exercised in accordance with the instructions given below and, if applicable, a new Purchase Warrant representing the number of Shares for which this Purchase Warrant has not been exercised.

or

The undersigned hereby elects irrevocably to convert its right to purchase Shares under the Purchase Warrant for Shares, as determined in accordance with the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where, X = The number of Shares to be issued to Holder;
Y = The number of Shares for which the Purchase Warrant is being exercised;
A = The fair market value of one Share which is equal to $; and
B = The Exercise Price which is equal to $ per share

The undersigned agrees and acknowledges that the calculation set forth above is subject to confirmation by the Company and any disagreement with respect to the calculation shall be resolved by the Company in its sole discretion.

Please issue the Shares as to which this Purchase Warrant is exercised in accordance with the instructions given below and, if applicable, a new Purchase Warrant representing the number of Shares for which this Purchase Warrant has not been converted.

Signature

Signature Guaranteed

INSTRUCTIONS FOR REGISTRATION OF SECURITIES

Name:
(Print in Block Letters)
Address:

NOTICE: The signature to this form must correspond with the name as written upon the face of the Purchase Warrant without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank, other than a savings bank, or by a trust company or by a firm having membership on a registered national securities exchange.

Form to be used to assign Purchase Warrant:

ASSIGNMENT

(To be executed by the registered Holder to effect a transfer of the within Purchase Warrant):

FOR VALUE RECEIVED, does hereby sell, assign and transfer unto the right to purchase shares of Jaguar Animal Health, Inc., a Delaware corporation (the "**Company**"), evidenced by the Purchase Warrant and does hereby authorize the Company to transfer such right on the books of the Company.

Dated: , 20

Signature

Signature Guaranteed

NOTICE: The signature to this form must correspond with the name as written upon the face of the within Purchase Warrant without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank, other than a savings bank, or by a trust company or by a firm having membership on a registered national securities exchange.

Exhibit 10.34

FORM OF JAGUAR ANIMAL HEALTH, INC. JUNE/2014 CONVERTIBLE NOTE EXERCISE AMENDMENT

WHEREAS, pursuant to a June 2, 2014 Convertible Note Purchase Agreement (the "Purchase Agreement"), Jaguar Animal Health, Inc., a Delaware corporation (the "Company") issued to the undersigned holder ("Holder") a Convertible Promissory Note ("Note");

WHEREAS, Holder and the Company desire to amend (x) the conversion price under Section 4 of all Notes issued to all holders pursuant to the Purchase Agreement (the "Notes") and (y) the "Maturity Date" under all Notes issued to all holders pursuant to the Purchase Agreement (the "Notes"), both to facilitate the "Company's IPO" (as defined below);

WHEREAS, Section 12 of the Notes provides that any term of all Notes issued pursuant to the Purchase Agreement may be amended (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and registered Majority Holders (as defined under the Notes);

NOW THEREFORE, the undersigned Holder and the Company hereby agree to amend Section 4 (Conversion) in its entirety and the first sentence of Section 1 (Maturity) under the Notes, to read in their entirety as follows in accordance with and subject to Section 12 of the Notes (all counterparts to this Amendment being deemed one and the same instrument):

1. "Maturity; Payment. If not sooner paid or converted according to the terms hereof, the outstanding principal amount of this Note and all accrued and unpaid interest thereon shall be due and payable in full immediately upon written demand of the "Majority Holders" after June 30, 2015 (the "**Maturity Date**").

4. "Conversion Upon IPO.

(a) Subject to Section 5, upon the closing of the sale of shares of Common Stock of the Company (the "Common Stock") to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "**Company IPO**") on, or before, June 30, 2015, the outstanding principal amount under this Note shall automatically convert into the Company's Common Stock into that number of fully paid and nonassessable shares of the Company's Common Stock determined by dividing all of the unpaid principal due on this Note as of the date of the Company IPO by $5.60, as adjusted for any dividends, stock splits, recapitalizations, reclassifications, or combination of shares."

(b) Subject to Section 5, if the Company has not consummated a Company IPO on, or before, June 30, 2015, then all principal then outstanding under this Note shall automatically convert into the Company's Common Stock into that number of fully paid and nonassessable shares of the Company's Common Stock determined by dividing all of the unpaid principal due on this Note as of the date of the Company IPO by $2.696, as adjusted for any dividends, stock splits, recapitalizations, reclassifications, or combination of shares."

The undersigned have executed this Convertible Note Exercise Amendment effective as of March , 2015.

Holder:

_____
(Print Name)

By: _____
(Signature)

_____
(Print Name and Title)

Company

By: _____
(Signature)

_____
(Print Name and Title)

Exhibit 10.35

FORM OF JAGUAR ANIMAL HEALTH, INC. WARRANT & NOTE EXERCISE AMENDMENT

WHEREAS, pursuant to a December 23, 2014 Note and Warrant Purchase Agreement (the "Purchase Agreement"), Jaguar Animal Health, Inc., a Delaware corporation (the "Company") issued to the undersigned holder ("Holder") a Common Stock Warrant (the "Warrant") and Convertible Promissory Note ("Note");

WHEREAS, Holder and the Company desire to amend (x) the "Exercise Price" under all Warrants issued to all holders pursuant to the Purchase Agreement (the "Warrants") and (y) the "Conversion Price" under all Notes issued to all holders pursuant to the Purchase Agreement (the "Notes"), both to facilitate the "Company's IPO" (as defined below);

WHEREAS, Section 6.(g) of the Notes provides that Notes may be amended or modified, and the obligations of the Company and the rights of each Holder under the Notes may be waived, amended or terminated, upon the written consent of the Company and the Holders of a majority of principal then outstanding under all Notes;

WHEREAS, Section 13 of the Warrants provides that the Warrants may be amended or modified, and the obligations of the Company and the rights of each Holder under the Warrants may be waived, amended or terminated, upon the written consent of the Company and the Holders of a majority of the shares of Warrant Stock (as defined thereunder) then exercisable at any point in time;

NOW THEREFORE, the undersigned Holder and the Company hereby agree that the "Exercise Price" under the Warrants and the "Conversion Price" under the Notes are hereby amended in their entirety as follows in accordance with and subject to Section 6.(g) of the Notes and Section 13 of the Warrants (all counterparts to this Amendment being deemed one and the same instrument):

Section 1 (a) under the Warrants shall read in its entirety as follows:

"Exercise Price" means, subject to adjustment under Section 3 below, (i) upon the closing of the sale of shares by the Company of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, on, or before, June 30, 2015 (the "**Company's IPO**"), the Exercise Price shall be equal to $5.60 per share and (ii) if the Company has not consummated the Company's IPO on, or before, June 30, 2015, then the Exercise Price shall thereafter be $2.696 per share.

The definition of "Conversion Price" as set forth in Section 1(a) of the Notes shall only mean, (i) upon the closing of the sale of shares by the Company of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, on, or before, June 30, 2015 (the "**Company's IPO**"), the Conversion Price shall be equal to $5.60 per share, as adjusted for any dividends, stock splits, recapitalizations, reclassifications, or combination of shares; and (ii) if the Company has not consummated the Company's IPO on, or before, June 30, 2015, then the Conversion Price shall thereafter be $2.696 per share, as adjusted for any dividends, stock splits, recapitalizations, reclassifications, or combination of shares.

The undersigned have executed this Warrant & Note Exercise Amendment effective as of March , 2015.

Holder:

_____
(Print Name)

By: _____
(Signature)

_____
(Print Name and Title)

Company

By: _____
(Signature)

_____
(Print Name and Title)

Exhibit 10.36

FORM OF JAGUAR ANIMAL HEALTH, INC. NOTE EXERCISE AMENDMENT AND CONVERSION AGREEMENT

WHEREAS, pursuant to a December 23, 2014 Note and Warrant Purchase Agreement (the "Purchase Agreement"), Jaguar Animal Health, Inc., a Delaware corporation (the "Company") issued to the undersigned holder ("Holder") a Convertible Promissory Note ("Note");

WHEREAS, Holder and the Company desire to amend all Notes issued to all holders (collectively, the "Holders") pursuant to the Purchase Agreement (collectively, the "Notes") with respect to each such Holder's right to elect to convert his Note upon the "Company's IPO" (as defined in the Note), to facilitate the Company's IPO;

WHEREAS, Section 6.(g) of the Notes provides that all Notes may be amended or modified, and the obligations of the Company and the rights of each Holder under the Notes may be waived, amended or terminated, upon the written consent of the Company and the Holders of a majority of principal then outstanding under all Notes;

NOW THEREFORE, the undersigned Holder and the Company hereby agree as follows:

1. The following sentence is hereby added at the end of Section 1(a) under all Notes:

"Notwithstanding anything to the contrary under this Section 1(a), Holder may elect in writing with written notice to the Company given prior to the Company's IPO and on, or prior to, March 27, 2015, to convert effective as of the Company's IPO all principal under this Note at the Conversion Price of $5.60 per share, as adjusted for any dividends, stock splits, recapitalizations, reclassifications, or combination of shares."

2. To facilitate and in consideration of the Company's IPO, Holder hereby irrevocably elects and agrees with no further consent required by Holder to convert all principal under Holder's Note in the principal amount set forth below effective immediately as of consummation of the Company's IPO.

The undersigned have executed this Note Exercise Amendment and Conversion Agreement effective as of March , 2015.

Holder: (Principal Amount $)

_____
(Print Name)

By: _____
(Signature)

_____
(Print Name and Title)

Company

By: _____
(Signature)

_____
(Print Name and Title)

THE SECURITIES TO WHICH THIS AGREEMENT RELATES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED ("SECURITIES ACT"), OR UNDER ANY STATE SECURITIES LAWS ("BLUE SKY LAWS"), AND MAY NOT BE OFFERED OR SOLD WITHOUT REGISTRATION UNDER THE SECURITIES ACT, AND AS REQUIRED BY BLUE SKY LAWS IN EFFECT AS TO SUCH TRANSFER, UNLESS AN EXEMPTION FROM SUCH REGISTRATION UNDER STATE AND FEDERAL LAW IS AVAILABLE. THE CONVERTIBLE PROMISSORY NOTE PURCHASED UNDER THIS AGREEMENT AND ANY SECURITIES INTO WHICH THE CONVERTIBLE PROMISSORY NOTE IS CONVERTIBLE ARE ALSO SUBJECT TO RESTRICTIONS ON TRANSFER CONTAINED IN THIS PURCHASE AGREEMENT.

CONVERTIBLE NOTE AND WARRANT PURCHASE AGREEMENT

THIS CONVERTIBLE NOTE AND WARRANT PURCHASE AGREEMENT (the "Agreement") is dated for references purposes as of March 20, 2015 (the "Effective Date"), by and between Jaguar Animal Health, Inc., a Delaware corporation (the "Company") and Dechra Pharmaceuticals PLC (the "Investor").

RECITALS

Investor desires to purchase from the Company, and the Company desires to sell to Investor, a Convertible Promissory Note in form and substance attached hereto as Exhibit A (the "Note") in the principal set forth on the signature page and a Warrant in form and substance attached hereto as Exhibit B (the "Warrant") to purchase the Company's Common Stock, all on the terms and conditions hereinafter set forth.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual agreements, covenants, representations and warranties contained in this Agreement, the parties hereby agree as follows:

1. Purchase and Sale of Note and Warrant.

a. Sale and Issuance of Note and Warrant. Subject to the terms and conditions of this Agreement, Investor agrees to purchase at the Closing (as defined below), and the Company agrees to sell and issue to Investor at the Closing, the Note in the principal amount set forth on the signature page and a Warrant to purchase that number of Shares as calculated and set forth on the signature page (and where the reference is applicable, the Note and Warrant and all equity underlying the Note and Warrant, collectively, the "Securities").

b. Payment and Delivery. Investor shall purchase the Note and Warrant by making payment to the Company in cash, by check or wire transfer of funds of the aggregate purchase price of the Note and Warrant as set forth on the signature page (the "Purchase Price") delivered to the Company on the Effective Date (the "Closing").

c. Delivery of Note. Upon Investor's delivery of the Purchase Price in full and a fully executed and completed original of this Purchase Agreement, the Note and Warrant,

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the Company will deliver the Note and Warrant to Investor (the "Closing").

d. Tax Matters. The Company and the Investor, as a result of the arm's length bargaining, agree that: neither the Investor nor any affiliated company has rendered any services to the Company in connection with this Agreement; none of the Warrants are being or will be issued as compensation. The Investor hereby agrees and acknowledges that interest payments under the Note may be withheld by the Company to comply with applicable U.S. state and federal tax laws, rules and regulations, unless a U.S. exemption from such withholding exists and Investor has complied with all such exemptions under applicable U.S. state and federal tax rules, regulations and laws, including but limited if applicable delivery to the Company of a validly completed and executed IRS Form W-8 BEN or IRS Form W-9, as applicable, establishing Investor's exemption from withholding.

2. Company's Representations and Warranties. Except as set forth on the Schedule of Exceptions attached hereto, the Company hereby represents and warrants to Investor as of the Effective Date as follows:

a. Organization, Good Standing and Qualification. The Company is a corporation duly organized and validly existing under the laws of the State of Delaware. The Company has all requisite corporate power and authority to own and operate its properties and assets, to execute and deliver this Agreement and sell the Securities, and to carry out the provisions of this Agreement and to carry on its business as presently conducted. The Company is duly qualified and is authorized to do business and is in good standing as a foreign corporation in all jurisdictions in which the nature of its activities and of its properties (both owned and leased) makes such qualification necessary, except for those jurisdictions in which failure to do so would not have a material adverse effect on the Company or its business.

b. Authorization; Binding Obligations. All corporate action on the part of the Company, its managers, officers, directors and members necessary for the authorization of this Agreement, and the Securities and the performance of all obligations of the Company hereunder and thereunder at the Closing has been taken or will be taken prior to the Closing

c. Liabilities/Capitalization. Other than obligations of the Company arising from trade payables, lease obligations and the like and any accrued salaries or consulting fees incurred in the ordinary course of business, the Company does not have any (i) material liabilities in the aggregate in excess of $500,000 and (ii) equity issued or rights to acquire equity other than those disclosed in the Company's Amendment #5 to its S-1 Registration Statement filed with the Securities & Exchange Commission ("Registration Statement").

d. Validly Issued. All of the shares issuable upon conversion of the Note in accordance with the rights of conversion provided thereunder will, upon conversion as provided under the Note, be validly issued, fully paid and nonassessable.

3. Investor Representations and Warranties. Investor represents and warrants to the Company that:

a. **Requisite Power and Authority.** Investor has all necessary power and authority under all applicable provisions of law to execute and deliver this Agreement and to carry out their provisions. All action on Investor's part required for the lawful

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execution and delivery of this Agreement and the Note and Warrant have been or will be effectively taken prior to the Closing.

b. **Account.** Investor is acquiring the Securities for investment for Investor's own account, and not with a view to, or for resale in connection with, any distribution thereof, and Investor has no present intention of selling or distributing any of the Securities. Investor understands that the Securities have not been registered under the Securities Act of 1933, as amended (the "Securities Act") by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona fide nature of the investment as expressed herein.

c. **Access to Data.** Investor has had an opportunity to discuss the Company's business, management and financial affairs with its management and to obtain any additional information which Investor has deemed necessary or appropriate for deciding whether or not to purchase the Securities, including an opportunity to receive, review and understand the information set forth in the charter documents of the Company and the Company's financial statements, capitalization and other business information as Investor deems prudent. Investor acknowledges that no other representations or warranties, oral or written, have been made by the Company or any agent thereof except as set forth in this Agreement.

d. **No Fairness Determination.** Investor is aware that no federal, state or other agency has made any finding or determination as to the fairness of the investment, nor made any recommendation or endorsement of the Securities.

e. **Knowledge and Experience.** Investor has such knowledge and experience in financial and business matters, including investments in other start-up companies that such individual is capable of evaluating the merits and risks of the investment in the Securities and it is able to bear the economic risk of such investment. Investor is an "accredited" investor as that term is defined under Regulation D promulgated under the Securities Act (as more fully set forth on Schedule 1 attached hereto). Further, Investor has such knowledge and experience in financial and business matters that such individual is capable of utilizing the information made available in connection with the offering of the Securities, of evaluating the merits and risks of an investment in the Securities and of making an informed investment decision with respect to the Securities.

f**.** **No Public Market.** Investor is aware that there is currently no public market for the Company's securities. There is no guarantee that a public market will develop at any time in the future. Investor understands that the Securities are all unregistered and may not presently be sold. Investor understands that the Securities cannot be readily sold or liquidated in case of an emergency or other financial need. Investor has sufficient liquid assets available so that the purchase and holding of the Securities will not cause Investor undue financial difficulties.

g**.** **Rule 144.** Investor acknowledges and agrees that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Investor has been advised or is aware of the provisions of Rule 144 promulgated under the Securities Act as in effect from time to time, which permits limited resale of shares purchased in a private placement subject to the satisfaction of certain conditions, including, among other things: the availability of certain

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current public information about the Company, the resale occurring following the required holding period under Rule 144 and the number of shares being sold during any three-month period not exceeding specified limitations.

h**.** **Residence.** Investor resides in the jurisdiction identified in the address set forth on the signature page.

i. **Foreign Investors.** If Investor is not a United States person (as defined by Rule 902(k) under the Securities Act), Investor hereby represents that it has satisfied itself as to the full observance of the laws of its jurisdiction in connection with any invitation to subscribe for the Securities or any use of this Agreement, including (i) the legal requirements within its jurisdiction for the purchase of the Securities, (ii) any foreign exchange restrictions applicable to such purchase, (iii) any governmental or other consents that may need to be obtained and (iv) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale or transfer of the Securities. Investor's subscription and payment for, and its continued beneficial ownership of the Securities, will not violate any applicable securities or other laws of Investor's jurisdiction. Investor also hereby represents that Investor is not a "10-percent shareholder" of the Company as defined in Section 871(h) of the Internal Revenue Code of 1986, as amended.

4. **Restrictive Legends.** Each instrument evidencing the Securities which Investor may purchase hereunder and any other securities issued upon any stock split, stock dividend, recapitalization, merger, consolidation or similar event (unless no longer required in the opinion of the counsel for the Company) may be imprinted with legends substantially in the following form:

THE SECURITIES OF THE COMPANY OFFERED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), IN RELIANCE UPON REGULATION D PROMULGATED UNDER THE ACT, AND THE SECURITIES OFFERED HEREBY HAVE NOT BEEN QUALIFIED UNDER APPLICABLE STATE SECURITIES LAWS IN THE STATES WHERE THIS OFFERING IS MADE. THEREFORE, THE SECURITIES MAY NOT BE SOLD OR TRANSFERRED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION UNDER THE ACT OR QUALIFICATION UNDER SUCH STATE SECURITIES LAWS OR AN OPINION OF COUNSEL THAT SUCH REGISTRATION AND QUALIFICATION IS NOT REQUIRED. THESE SECURITIES MAY BE SUBJECT TO ADDITIONAL RESTRICTIONS PURSUANT TO EXEMPTIONS IN THE VARIOUS STATES WHERE THEY ARE BEING SOLD.

THE SECURITIES REPRESENTED BY THIS INSTRUMENT ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER SET FORTH IN THAT CERTAIN CONVERTIBLE NOTE AND WARRANT PURCHASE AGREEMENT DATED EFFECTIVE

MARCH 20, 2015 BY AND BETWEEN THE ORIGINAL HOLDER HEREOF AND THE COMPANY AS WELL AS THE COMPANY'S BYLAWS, COPIES OF WHICH MAY BE OBTAINED UPON REQUEST.

The Company shall be entitled to enter stop transfer notices on its transfer books with respect to the Securities.

5. Reliance/Bad Actor Disqualification. Investor is aware that the Company is relying on the accuracy of the above representations to establish compliance with Federal and State securities laws. Investor represents that neither Investor, nor any person or entity with whom Investor shares beneficial ownership of the Company's securities, is subject to any of the "Bad Actor" disqualifications described in Rule 506(d)(1)(i) to (viii) under the Securities Act, attached hereto as Annex I.

6. Miscellaneous.

a. Survival. The representations, warranties, covenants and agreements made herein shall survive the closing of the transactions contemplated hereby.

b. Successors and Assigns. Except as otherwise expressly provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto.

c. Entire Agreement. This Agreement, the Exhibits, Schedule, Registration Statement and Annex attached hereto and the Company's charter documents constitute the entire agreement and understanding between the parties with respect to the subject matters herein, and supersede and replace any prior agreements and understandings, whether oral or written between and among them with respect to such matters. The provisions of this Agreement may be waived, altered, amended or repealed, in whole or in part, only upon the written consent of the Company and Investor.

d. Title and Subtitles. The titles of the Sections and subsections of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

e. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

f. Applicable Law. This Agreement shall be governed by and construed in accordance with laws of the State of Delaware, applicable to contracts

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between Delaware residents entered into and to be performed entirely within the State of Delaware.

g. Venue. Any action, arbitration, or proceeding arising directly or indirectly from this Agreement or any other instrument or security referenced herein shall be litigated or arbitrated, as appropriate, in San Francisco, California.

h. Authority. If Investor is a corporation, partnership, trust or estate: (i) the individual executing and delivering this Agreement on behalf of Investor has been duly authorized and is duly qualified to execute and deliver this Agreement in connection with the purchase of the Securities and (ii) the signature of such individual is binding upon Investor.

i. Notices. All notices and other communications provided for or permitted hereunder shall be made by hand-delivery, or may be sent by email at the email address set forth below or by facsimile to any phone number provided by the parties hereto, or overnight air courier guaranteeing next day delivery at the addresses set forth on the signature page hereof to the Investor and with respect to the Company at its principal place of business. All such notices and communications shall be deemed to have been duly given at the time delivered by hand, if personally delivered; if emailed or telecopied, during regular business hours in San Francisco, California, on the date transmitted or the next business day if transmitted after such regular business hours; and the next business day after timely delivery to the courier, if sent by overnight air courier guaranteeing next day delivery. The parties may change the addresses to which notices are to be given by giving five days prior notice of such change in accordance herewith.

j. Tax Matters, Etc. INVESTOR HAS BEEN ADVISED TO CONSULT WITH MY OWN ATTORNEY OR TAX ADVISOR REGARDING THE LEGAL AND TAX CONSEQUENCES OF MY INVESTMENT IN THE NOTE AND WARRANT. I AM NOT RELYING DIRECTLY OR INDIRECTLY ON ANY ADVICE WHICH LEGAL COUNSEL TO THE COMPANY MAY HAVE GIVEN, AND AGREE THAT SUCH LEGAL COUNSEL DOES NOT REPRESENT OR UNDERTAKE TO REPRESENT MY INDIVIDUAL INTEREST OR OTHERWISE. IN PARTICULAR, I AGREE THAT SUCH LEGAL COUNSEL HAS NOT GIVEN ANY TAX ADVICE, DIRECTLY OR INDIRECTLY, TO ME OR FOR MY BENEFIT, THAT NO "TAX OPINION" HAS BEEN PREPARED OR GIVEN IN CONNECTION WITH THE NOTE AND THAT NO "TAX SHELTER" BENEFITS HAVE BEEN PROMISED TO ME BY ANYONE. I FURTHER AGREE THAT I AM NOT RELYING ON OR EXPECTING LEGAL COUNSEL TO THE COMPANY TO UNDERTAKE ANY "DUE DILIGENCE" IN CONNECTION WITH THE OFFER AND SALE OF THE NOTE AND WARRANT

AND THAT THE SCOPE OF LEGAL COUNSEL'S ENGAGEMENT SHALL BE DETERMINED SOLELY BY AGREEMENT BETWEEN COUNSEL AND THE COMPANY. I AGREE THAT COUNSEL TO THE COMPANY SHALL HAVE NO DUTY TO ME TO VERIFY OR INVESTIGATE ANY MATERIAL FACTS STATED OR OMITTED IN CONNECTION WITH THE ISSUANCE OF THE NOTE AND WARRANT.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have each executed this Agreement effective as of the Effective Date.

INVESTOR	**JAGUAR ANIMAL HEALTH, INC.**
By: /s/ Ian Page	By: /s/ John A. Kallassy
(Signature)	(Signature)
Ian Page, CEO	John A. Kallassy, CFO
(Print Name and Title)	(Print Name and Title)

(Investor Address for Notices and Investment Decisions)

_____

_____

_____
(Telephone Number and Facsimile Number)

_____
(Email Address)

_____
(Federal Taxpayer Identification Number)

Purchase Price/Principal Amount of Note: $1,000,000.00

Number of Warrant Shares (rounded down to nearest whole number and qualified in its entirety by the terms of the Warrant) = (50% of Note Principal Divided by the Exercise Price as established in the Warrant).

SCHEDULE 1

ACCREDITED INVESTOR

I am an accredited investor because I had individual income in excess of $200,000 in each of the last two calendar years or joint income with my spouse in excess of $300,000 in each of the last two calendar years and I reasonably expect to attain levels of income this year at least equal to these amounts. For the purposes of this Agreement, individual income means adjusted gross income, as reported for federal income tax purposes, less any income attributable to a spouse or to property owned by a spouse, increased by the following amounts (but not including any amounts attributable to a spouse or property owned by a spouse): (i) the amount of any tax exempt interest income received; (ii) the amount of losses claimed as a limited partner in a limited partnership; (iii) any deduction claimed for depletion, (iv) amounts contributed to an IRA or Keogh retirement plan; (v) alimony paid; and (vi) any amount by which income from long-term capital gains has been reduced in arriving at adjusted gross income pursuant to the provisions of Section 1202 of the Internal Revenue Code.

OR

I am an accredited investor because I have an individual net worth, or my spouse and I have a combined individual net worth, in excess of $1,000,000.

As used herein, the term “net worth” means the excess of total assets at fair market value over total liabilities. For the purpose of determining a person’s net worth, the principal residence owned by an individual must be excluded, while “income” means actual economic income, which may differ from adjusted gross income for income tax purposes. Accordingly, Investor should consider whether it should add any or all of the following items to its adjusted gross income for income tax purposes in order to reflect more accurately its actual economic income: Any amounts attributable to tax-exempt income received, losses claimed as a limited partner in any limited partnership, deductions claimed for depletion, contributions to an IRA or Keogh retirement plan, and alimony payments.

OR

ACCREDITED PARTNERSHIPS, CORPORATIONS, TRUSTS OR OTHER ENTITIES

Investor was not formed for the specific purpose of investing in the Company and;

Investor has a net worth of at least $5,000,000.

OR

All of the beneficial owners of equity in the investor qualify as accredited individual investors as set forth above.

AND

If a trust, Investor is a trust whose purchase is directed by a sophisticated person having such knowledge and experience in financial matters that he is capable of evaluating the merits and risks of an investment in the Company.

BAD ACTOR

ANNEX I

Rule 506(d)(1)(i) to (viii) under the Securities Act of 1933, as amended

(i) Has been convicted, within ten years before such sale (or five years, in the case of issuers, their predecessors and affiliated issuers), of any felony or misdemeanor:

(A) In connection with the purchase or sale of any security;

(B) Involving the making of any false filing with the Commission; or

(C) Arising out of the conduct of the business of an underwriter, broker, dealer, municipal securities dealer, investment adviser or paid solicitor of purchasers of securities;

(ii) Is subject to any order, judgment or decree of any court of competent jurisdiction, entered within five years before such sale, that, at the time of such sale, restrains or enjoins such person from engaging or continuing to engage in any conduct or practice:

(A) In connection with the purchase or sale of any security;

(B) Involving the making of any false filing with the Commission; or

(C) Arising out of the conduct of the business of an underwriter, broker, dealer, municipal securities dealer, investment adviser or paid solicitor of purchasers of securities;

(iii) Is subject to a final order of a state securities commission (or an agency or officer of a state performing like functions); a state authority that supervises or examines banks, savings associations, or credit unions; a state insurance commission (or an agency or officer of a state performing like functions); an appropriate federal banking agency; the U.S. Commodity Futures Trading Commission; or the National Credit Union Administration that:

(A) At the time of such sale, bars the person from:

(1) Association with an entity regulated by such commission, authority, agency, or officer;

(2) Engaging in the business of securities, insurance or banking; or

(3) Engaging in savings association or credit union activities; or

(B) Constitutes a final order based on a violation of any law or regulation that prohibits fraudulent, manipulative, or deceptive conduct entered within ten years before such sale;

(iv) Is subject to an order of the Commission entered pursuant to section 15(b) or 15B(c) of the Securities Exchange Act of 1934 (15 U.S.C. 78o(b) or 78o-4(c)) or section 203(e) or (f) of the Investment Advisers Act of 1940 (15 U.S.C. 80b-3(e) or (f)) that, at the time of such sale:

(A) Suspends or revokes such person's registration as a broker, dealer, municipal securities dealer or investment adviser;

(B) Places limitations on the activities, functions or operations of such person; or

(C)Bars such person from being associated with any entity or from participating in the offering of any penny stock;

(v) Is subject to any order of the Commission entered within five years before such sale that, at the time of such sale, orders the person to cease and desist from committing or causing a violation or future violation of:

(A) Any scienter-based anti-fraud provision of the federal securities laws, including without limitation section 17(a)(1) of the Securities Act of 1933 (15 U.S.C. 77q(a)(1)), section 10(b) of the Securities Exchange Act of 1934 (15 U.S.C. 78j(b)) and 17 CFR 240.10b-5, section 15(c)(1) of the Securities Exchange Act of 1934 (15 U.S.C. 78o(c)(1)) and section 206(1) of the Investment Advisers Act of 1940 (15 U.S.C. 80b-6(1)), or any other rule or regulation thereunder; or

(B) Section 5 of the Securities Act of 1933 (15 U.S.C. 77e).

(vi) Is suspended or expelled from membership in, or suspended or barred from association with a member of, a registered national securities exchange or a registered national or affiliated securities association for any act or omission to act constituting conduct inconsistent with just and equitable principles of trade;

(vii) Has filed (as a registrant or issuer), or was or was named as an underwriter in, any registration statement or Regulation A offering statement filed with the Commission that, within five years before such sale, was the subject of a refusal order, stop order, or order suspending the Regulation A exemption, or is, at the time of such sale, the subject of an investigation or proceeding to determine whether a stop order or suspension order should be issued; or

(viii) Is subject to a United States Postal Service false representation order entered within five years before such sale, or is, at the time of such sale, subject to a temporary restraining order or preliminary injunction with respect to conduct alleged by the United States Postal Service to constitute a scheme or device for obtaining money or property through the mail by means of false representations.

EXHIBIT A

FORM OF CONVERTIBLE NOTE

EXHIBIT B

FORM OF WARRANT

THE SECURITIES REPRESENTED HEREBY (AND THE SECURITIES ISSUABLE UPON CONVERSION OF THIS NOTE) HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, HYPOTHECATED, OR OTHERWISE TRANSFERRED EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933 OR, IF REQUESTED BY THE COMPANY, AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT REGISTRATION IS NOT REQUIRED UNDER SUCH ACT.

JAGUAR ANIMAL HEALTH, INC.

CONVERTIBLE PROMISSORY NOTE

JAG- -Note March 20, 2015

JAGUAR ANIMAL HEALTH, INC., a Delaware corporation (the "**Company**"), for value received, promises to pay to **DECHRA PHARMACEUTICALS PLC** or its registered assigns (the "**Holder**"), the principal sum of One Million Dollars ($1,000,000), plus simple interest thereon from the date of this Note until paid in full at the rate of twelve percent (12.0%) per annum.

If this Note has not automatically converted on, or prior to, June 30, 2015, as provided below, this Note shall be due and payable on July 31, 2016. Unless otherwise converted as provided under this Note, payment of principal and any accrued but unpaid interest when due shall be made at the address of the Holder set forth in Section 6(e) below (or at such other place in the United States as the Holder shall designate to the Company in writing) in lawful money of the United States of America. Interest on this Note shall be computed on the basis of a 365-day year and actual days elapsed. Accrued interest shall be paid annually on each anniversary date of this Note until the principal hereunder has been paid in full through repayment or conversion as herein provided.

This Note is issued pursuant to the terms of that certain Note and Warrant Purchase Agreement dated for reference purposes as of March 20, 2015 (the "**Purchase Agreement**") by and between the Company and the Holder. This Note shall be subject to all of the terms and conditions of the Purchase Agreement (including but not limited to the investor representations set forth in Section 3 of the Purchase Agreement).

The following is a statement of the rights of the Holder and the conditions to which this Note is subject, and to which the Holder, by the acceptance of this Note, agrees (all subject to such adjustments as provided elsewhere in this Note):

1. Conversion/Prepayment.

(a) Subject to all other terms and conditions set forth in this Note, including but not limited to execution of the Investment Representation Statement set forth as Exhibit A attached hereto upon a voluntary conversion, this Note is convertible into the Company's Common Stock at the "Conversion Price" (as defined below) as follows: Upon the closing of the sale of shares by the Company of Common Stock to the public in a firm-commitment

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underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, which is consummated on, or before, June 30, 2015 (the "**Company's IPO**"), all principal then outstanding on this Note shall automatically convert into shares of the Company's Common Stock at the "Conversion Price" which shall be $5.60 per share, as adjusted for any dividends, stock splits, recapitalizations, reclassifications, or combination of shares (the "**IPO Conversion Price**"). If the Company has not consummated the Company's IPO on, or before, June 30, 2015, the Holder may convert into shares of the Company's Common Stock all but not less than all principal then outstanding on this Note at any time thereafter and on, or prior to, July 31, 2016 at the "Conversion Price" which shall then be equal to $2.696 per share, as adjusted for any dividends, stock splits, recapitalizations, reclassifications, or combination of shares(the **"No IPO Conversion Price"**). In the event that the Note remains outstanding after July 31, 2016, then the outstanding principal balance of this Note and any unpaid accrued interest shall upon the election of the Holder convert into shares of the Company's Common Stock at the No IPO Conversion Price, unless after seven (7) calendar days prior written notice from the Company to Holder of its intention to repay the Note given at any time after July 31, 2016, the Company has paid all outstanding principal and accrued but unpaid interest in full within ten (10) calendar days following termination of such seven (7) calendar day period.

(b) Notwithstanding anything set forth in this Note to the contrary, subject to the notice requirement set forth below in this sub-clause (b), in the event of a Change of Control (as defined below) prior to repayment or conversion in full of this Note as provided above, this Note shall become immediately due and payable and all conversion rights under this Note shall terminate as of the Change of Control. Subject to the preceding sentence, upon written notice from the Company to Holder provided at least seven (7) calendar days prior to a Change of Control notifying Holder of the material financial terms of the Change of Control, Holder may elect to convert all but not less than all principal then outstanding under this Note at the No IPO Conversion Price. The term "Change of Control" means a sale, lease, exchange, exclusive license, transfer or other disposition of all or substantially all of the property, assets or business of the Company, or a merger or consolidation with or into any other corporation or other business transaction or series of transactions as a result of which stockholders of the Company immediately prior to the transaction would hold less than a majority of the voting interests of the Company (or successor) after the transaction; *provided, however*, that a Change of Control shall not include any transaction or series of related transactions principally for bona fide equity financing purposes (including, but not limited to, the Company's IPO) in which cash is received by the Company or indebtedness of the Company is cancelled or converted or a combination thereof occurs.

2. Mechanics of Conversion.

(a) Fractional Shares. No fractional shares of the capital stock of the Company shall be issued upon conversion of this Note. In lieu of any fractional shares to which the Holder would otherwise be entitled upon conversion of this Note pursuant to Section 1(a) above, the Company shall pay cash equal to such fraction multiplied by the applicable Conversion Price.

(b) Stock Certificates. The Company shall, as soon as practicable following such conversion of this Note (and only after Holder has delivered the Investment Representation Statement set forth on Exhibit A hereto in the case of a voluntary conversion), issue and deliver to the holder of this Note, or to its nominee or nominees, a certificate or certificates for the number of shares of the capital stock of the Company to which such holder shall be entitled as aforesaid (the "**Conversion Shares**"). Such conversion shall be deemed to have been made immediately prior to the close of business on the date of conversion of

this Note, provided that no such voluntary conversion shall have been deemed to made unless and until the duly executed Investment Representation Statement has been delivered by Holder to the Company . The person or persons entitled to receive such Conversion Shares shall be treated for all purposes as the record holder(s) of such Conversion Shares on such date. Upon conversion of this Note, the Company shall be forever released from all of its obligations and liabilities under this Note other than its obligation to pay the accrued interest at such time as the Note is otherwise due and payable.

3. Charges, Taxes and Expenses. Issuance of a certificate for Conversion Shares or any other securities upon the conversion of this Note shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificate shall be issued in the name of the Holder, or such certificates shall be issued in such name or names as may be directed by the Holder; provided, however, that in the event certificates for Conversion Shares (or replacement Notes) or other securities are to be issued in a name other than the name of the Holder, this Note when surrendered for exercise or transfer shall be accompanied by the Assignment Form attached hereto duly executed by the Holder; and provided further, that upon any transfer involved in the issuance or delivery of any certificates for shares of Conversion Shares or replacement Notes (or other securities), the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. Any transfer shall be subject to (i) the transferee's agreement in writing to be subject to the applicable terms of this Note (including but not limited to all investor suitability requirements as set forth in the Purchase Agreement) and (ii) compliance with all applicable state and federal securities laws (including the delivery of investment representation letters, legal opinions and market stand-off agreements reasonably satisfactory to the Company, if such are requested by the Company). The Holder agrees that Holder shall execute such documents, and perform such acts, which are reasonably required to assure that the conversion hereof is consummated in compliance with all applicable laws.

4. No Rights as Stockholder. The Holder shall not have any rights as a stockholder of the Company with regard to this Note or the Conversion Shares unless and until, and only to the extent, this Note is converted pursuant to the terms of Section 1(a) above.

5. Loss, Theft or Destruction of Note. Upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft or destruction of this Note and of indemnity or security reasonably satisfactory to the Company, Holder (or any permitted transferee in accordance with Section 3 above) shall execute a lost securities bond, in a form reasonably satisfactory to the Company. When the Company has received such lost securities bond,

executed and dated by the Holder (or by a permitted transferee), the Company will make and deliver a new Note which shall carry the same rights to interest (unpaid and to accrue) carried by this Note, stating that such Note is issued in replacement of this Note, making reference to the original date of issuance of this Note (and any successors hereto) and dated as of such cancellation. Upon issuance by the Company of a new Note to the Holder (or to a permitted transferee), this original Note shall have no value and shall be of no further force and effect; and, the Company shall have no liability to any bearer of this original Note.

6. Miscellaneous.

(a) Payments. Payments made under this Note shall first be credited to accrued but unpaid interest and then to principal.

(b) Issue Date; Governing Law. The provisions of this Note (and any Notes issued in replacement hereof) shall be construed and shall be given effect in all respects as if it had been issued and delivered by the Company on the date first above written. This Note shall be binding upon any successors or assigns of the Company. This Note shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to any choice of law principles, and without regard to the domicile of the Holder or any transferee.

(c) Restrictions. In connection with the initial public offering of the Company's securities and upon request of the Company or the underwriters managing such offering of the Company's securities, Holder (and any assignee) hereby agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed 180 days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the Company's initial public offering. In addition, upon request of the Company or the underwriters managing a public offering of the Company's securities (other than the initial public offering), Holder hereby agrees to be bound by similar restrictions, and to sign a similar agreement, in connection with no more than one additional registration statement filed within 12 months after the closing date of the initial public offering, provided that the duration of the lock-up period with respect to such additional registration shall not exceed 90 days from the effective date of such additional registration statement. Notwithstanding the foregoing, if during the last 17 days of the restricted period, the Company issues an earnings release or material news or a material event relating to the Company occurs, or prior to the expiration of the restricted period the Company announces that it will release earnings results during the 16-day period beginning on the last day of the restricted period, then, upon the request of the managing underwriter, to the extent required by any FINRA rules, the restrictions imposed by this subsection shall continue to apply until the end of the third trading day following the expiration of the 15-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event. In no event will the restricted period extend beyond 216 days after the effective date of the registration statement. In

addition to and not in lieu of the foregoing, as requested at any time by the Company or any underwriter of the Company, Holder hereby agrees and acknowledges that this Note and the Conversion Shares shall be subject to and Holder shall enter into any such lock-up provisions entered into by the Company's executive officers and directors at any time and from time to time as a condition to the issuance of this Note and obligation to issue the Conversion Shares. Holder acknowledges that such a lock-up agreement has been requested by the Company as a condition to the issuance of this Note and Holder shall execute and deliver to the Company and its underwriters such lock-up agreement.

(d) Assignment. This Note is in registered form within the meaning of Section 1.871-14(c)(1)(i) of the Income Tax Regulations for United States federal income and withholding tax purposes. This Note may be transferred only upon its surrender to the Company for registration of transfer, duly endorsed, or accompanied by a duly executed written instrument of transfer in form reasonably satisfactory to the Company. The Holder shall bear all expenses incurred by the Company with respect to (i) a determination by the Company that any such written instrument of transfer is satisfactory under applicable law and regulations, and (ii) the issuance and registration of a new Note or Notes to one or more transferees . Thereupon, this Note shall be reissued to, and registered in the name of, the transferee, or a new Note for like principal amount and interest shall be issued to, and registered in the name of, the transferee. Principal and interest shall be paid solely to the registered holder of this Note, and such payment shall constitute full discharge of the Company's obligation to pay such principal and interest.

(e) Notices. Any notice, request or other communications required or permitted hereunder shall be in writing and shall be deemed duly given if given in the manner provided in the Purchase Agreement to the address specified therein or to such other address that the Company or the Holder may specify pursuant to the terms thereof.

(f) Facsimile; Counterparts. This Note may be executed by the Company in facsimile form and, upon delivery of a faxed signature or a scanned signature in PDF format, if identified, legible and complete, such faxed or scanned executed copy of this Note to the Holder, this Note shall be binding upon and enforceable against the Company in accordance with its terms. This Note may be executed in one or more counterparts, each of which shall be deemed an original and all of which shall be deemed to be one and the same Note.

(g) Amendment or Waiver. This Note may be amended or modified, and the obligations of the Company and the rights of each Holder under this Note may be waived, amended or terminated, only upon the written consent of the Company and the Holder.

(h) Legends. The Holder by acceptance hereof, consents to the placement of the following restrictive legends, or similar legends, on each certificate held by the Holder in connection with the issuance of any Conversion Shares:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED SOLELY FOR INVESTMENT AND THE OFFER AND SALE OF SUCH SHARES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY STATE SECURITIES LAWS. SUCH SHARES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN OPINION OF COUNSEL SATISFACTORY TO

THE COMPANY AND ITS COUNSEL THAT SUCH SALE, OFFER, PLEDGE OR HYPOTHECATION IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE ACT AND OF ANY APPLICABLE STATE SECURITIES LAWS. COPIES OF THE AGREEMENT COVERING THE PURCHASE OF THESE SHARES AND RESTRICTING THEIR TRANSFER MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDER OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF THE CORPORATION AT THE PRINCIPAL EXECUTIVE OFFICES OF THE CORPORATION.

THE HOLDER OF THIS CERTIFICATE AGREES NOT TO ENGAGE IN ANY HEDGING TRANSACTIONS WITH REGARD TO THE SECURITIES REPRESENTED BY THIS CERTIFICATE UNLESS IN COMPLIANCE WITH THE SECURITIES ACT.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER AS SET FORTH IN THE PURCHASE AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SECURITIES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS ARE BINDING ON TRANSFEREES OF THESE SECURITIES.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FROM THE EFFECTIVE DATE OF THE CORPORATION'S FIRST UNDERWRITTEN PUBLIC OFFERING IN THE UNITED STATES AS MORE FULLY PROVIDED IN THE NOTE TO WHICH THESE SECURITIES WERE ISSUED.

(i) Usury Savings Clause. In the event any interest is paid on this Note which is deemed to be in excess of the then legal maximum rate, then that portion of the interest payment representing an amount in excess of the then legal maximum rate shall be deemed a payment of principal and applied against the principal of this Note.

[***SIGNATURE PAGE FOLLOWS***]

IN WITNESS WHEREOF, JAGUAR ANIMAL HEALTH, INC. has caused this Convertible Promissory Note to be executed by its officer thereunto duly authorized.

COMPANY:

JAGUAR ANIMAL HEALTH, INC.

By: /s/ John A. Kallassy
(Signature)

John A. Kallassy, CFO
(Print Name & Title)

ACCEPTED, ACKNOWLEDGED
AND AGREED TO AS OF THE
DATE FIRST ABOVE WRITTEN.

HOLDER:

/s/ Ian Page
(Signature)

Ian Page, CEO
(Print Name & Title)

ASSIGNMENT FORM

(To assign the foregoing Note, execute
this form and supply required information.
Do not use this form to convert the Note.)

FOR VALUE RECEIVED, and subject to compliance with applicable federal and state securities laws (including the delivery of investment representation letters, legal opinions and market stand-off agreements satisfactory to the Company, if such are requested by the Company), an interest corresponding to the unpaid principal amount of the foregoing Note and all rights evidenced thereby are hereby assigned to

_____

(Please Print)

whose address is _____

Dated: _____

Holder's Signature: _____

Holder's Address: _____

_____

Signature Guaranteed: _____

Transferee hereby acknowledges and agrees to be bound by the terms of the Note as of this day of , 20

By: _____
Its: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Note, without alteration or enlargement or any change whatever, and must be guaranteed by a bank or trust company. Officers of Company's and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Note.

EXHIBIT A

INVESTMENT REPRESENTATION STATEMENT

PURCHASER :

COMPANY : JAGUAR ANIMAL HEALTH, INC.

SECURITY : COMMON STOCK ISSUED UPON CONVERSION OF THE CONVERTIBLE PROMISSORY NOTE

AMOUNT : SHARES

DATE : , 20

In connection with the purchase of the above-listed Securities, the undersigned represents to the Company the following:

The undersigned is aware of the Company's business affairs and financial condition, and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. The undersigned is purchasing these Securities for its own account for investment purposes only and not with a view to, or for the resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933, as amended (the "**Securities Act**").

The undersigned understands that offer and sale of the Securities have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the undersigned's investment intent as expressed herein. In this connection, the undersigned understands that, in the view of the Securities and Exchange Commission (the "**SEC**"), the statutory basis for such exemption may be unavailable if this representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future.

The undersigned further understands that the Securities must be held indefinitely unless the offer and sale of the Securities are subsequently registered under the Securities Act or unless an exemption from registration is otherwise available. Moreover, the undersigned understands that the Company is under no obligation to register the offer and sale of the Securities. In addition, the undersigned understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless the offer and sale of the Securities are registered or such registration is not required in the opinion of counsel for the Company.

The undersigned is familiar with the provisions of Rule 144, promulgated pursuant to the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions.

The Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires, among other things, the existence of a public market for

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the Securities, the availability of certain current public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sales being effected through a "broker's transaction" or in transactions directly with a "market maker" and the number of Securities being sold during any three-month period not exceeding specified limitations.

The undersigned further understands that in the event that all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rule 144 is not exclusive, the Staff of the SEC has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk.

The undersigned hereby ratifies and confirms all of the original Holder's representations and warranties set forth in Section 3 of the Purchase Agreement, including but not limited to the undersigned is an "Accredited Investor" as set forth in the Purchase Agreement and is not a "Bad Actor" as set forth in the Purchase Agreement and Holder hereby represents that Holder has satisfied itself as to the full observance of the laws of its jurisdiction in connection with any invitation to subscribe for the Securities or any use of the Note, including (i) the legal requirements within its jurisdiction for the purchase of the Securities, (ii) any foreign exchange restrictions applicable to such purchase, (iii) any government or other consents that may need to be obtained in connection with such purchase, and (iv) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale or transfer of the Securities. Holder's purchase and payment for and continued beneficial ownership of the Conversion Shares will not violate any applicable securities or other laws of Holder's jurisdiction. Holder acknowledges that no representations or warranties, oral or written, have been made by the Company or any agent thereof in connection with Holder's conversion of this Note.

_____

(Signature)

_____

(Print Name)

Date:

_____

THIS WARRANT AND THE SHARES OF CAPITAL STOCK WHICH MAY BE PURCHASED PURSUANT TO THE EXERCISE OF THIS WARRANT HAVE BEEN ACQUIRED SOLELY FOR INVESTMENT AND THE OFFER AND SALE OF SUCH SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY STATE SECURITIES LAWS. SUCH SECURITIES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH SALE, OFFER, PLEDGE OR HYPOTHECATION IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE SECURITIES ACT AND OF ANY APPLICABLE STATE SECURITIES LAWS.

No. Date: March 20, 2015

Void after December 31, 2017 or earlier if terminated in accordance with Section 9 of this Warrant

JAGUAR ANIMAL HEALTH, INC.

COMMON STOCK WARRANT

THIS CERTIFIES THAT, for value received, Dechra Pharmaceuticals PLC (together with its permitted assignees, the "**Holder**"), is entitled to subscribe for and purchase at the exercise price per share established pursuant to Section 1(a) below (the **"Exercise Price"**) commencing at such time that the Exercise Price is first determined in accordance therewith and until **the "Expiration Date"** (as defined in Section 9 below) that number of shares of the fully paid and nonassessable shares of Common Stock, par value $0.0001 per share (the "**Common Stock**") of Jaguar Animal Health, Inc., a Delaware corporation (the "**Company**") determined by dividing 50% of the corresponding original principal amount of the Note issued under the Purchase Agreement by the Exercise Price (as adjusted pursuant to Section 3 hereof), subject to the provisions and upon the terms and conditions hereinafter set forth. The shares purchasable upon exercise of this Warrant, as adjusted from time to time pursuant to the provisions of this Warrant, are hereinafter referred to as the "**Warrant Stock**." This Warrant (the "**Warrant**") is issued pursuant to the terms of that certain Note and Warrant Purchase Agreement dated as of March 20, 2015 (the "**Purchase Agreement**") by and between the Company and the Holder. Capitalized terms used but not defined herein shall have the meaning therefor set forth in the Purchase Agreement. This Warrant shall be subject to all of the terms and conditions of the Purchase Agreement (including but not limited to the investor representations set forth in Section 3 of the Purchase Agreement).

1. Exercise Price; Method of Exercise; Payment.

(a) Exercise Price. **"Exercise Price"** means, subject to adjustment under Section 3 below, (i) upon the closing of the sale of shares by the Company of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, on, or before, June 30, 2015 (the "**Company's IPO**"), the Exercise Price shall be equal to $5.60 per share and (ii) if the Company has not consummated the Company's IPO on, or before, June 30, 2015, then the Exercise Price shall thereafter be $2.696 per share.

(b) Cash Exercise. Subject to Sections 9 and 10 hereof and Exhibit B attached hereto, the purchase rights represented by this Warrant may be exercised by the Holder, in whole or in part, only after the exercise price has been established pursuant to Section 1(a) above, by the surrender of this Warrant (with the notice of exercise form attached hereto as Exhibit A duly executed) at the principal office of the Company, and by the payment to the Company, by certified cashier's or other check acceptable to the Company or wire transfer, of an amount equal to the aggregate Exercise Price of the shares of Warrant Stock being purchased.

(c) Net Issue Exercise. Subject to Sections 9 and 10 hereof and Exhibit B attached hereto, in lieu of exercising this Warrant pursuant to Section 1(b) hereof, the Holder may elect to receive shares equal to the value of this Warrant (or the portion thereof being cancelled) by surrender of this Warrant (with the notice of exercise form attached hereto as Exhibit A duly executed) at the principal office of the Company, in which event the Company shall issue to the Holder a number of shares of Warrant Stock computed using the following formula:

$$X = \frac{Y\,(A-B)}{A}$$

Where X = the number of shares of Warrant Stock to be issued to the Holder.

Y = the number of shares of Warrant Stock purchasable under this Warrant or, if only a portion of the Warrant Stock is exercised, the portion of the Warrant Stock being exercised (as adjusted to the date of such calculation).

A = the fair market value of one share of Warrant Stock.

B = the Exercise Price (as adjusted to the date of such calculation).

(d) Fair Market Value. For purposes of this Section 1, the fair market value of the Warrant Stock shall mean:

(i) where there exists a public market for the Company's Common Stock at the time of such exercise, the fair market value per share shall be made giving due consideration to the average of the closing bid and asked prices of the Common Stock quoted in the Over-The-Counter Market Summary or the last reported sale price of the Common Stock or the closing price quoted on the Nasdaq National Market or any exchange on which the Common Stock is listed, whichever is applicable, as published in the Western Edition of The Wall Street Journal, for the five (5) trading days prior to the date as of which the fair market value is being determined. Notwithstanding the foregoing, in the event this Warrant is exercised in connection with the Company's initial public offering of Common Stock, the fair market value per share of Warrant Stock shall be the per share offering price to the public of the Company's initial public offering; and

(ii) If Section 1(d)(i) is not applicable, the fair market value of the Warrant Stock per share shall be the price per share which the Company could obtain from a willing buyer for shares sold by the Company from authorized but unissued shares of Warrant Stock as such price shall be determined in good faith by the Board of Directors.

(e) Stock Certificates. In the event of any exercise of the rights represented by this Warrant, certificates for the Warrant Stock so purchased shall be delivered to the Holder within a reasonable time and, unless this Warrant has been fully exercised or has expired, a new Warrant representing the shares with respect to which this Warrant shall not have been exercised shall also be issued to the Holder within such time.

2. Stock Fully Paid; Reservation of Stock. All of the Warrant Stock issuable upon the exercise of the rights represented by this Warrant will, upon issuance and receipt of the Exercise Price therefor, be fully paid and nonassessable, and free from all preemptive rights, rights of first refusal, taxes, liens and charges with respect to the issue thereof, except as may be set forth in the Company's Bylaws or any contractual agreement to which the Holder or the Warrant Stock may be subject. During the period within which the rights represented by this Warrant may be exercised, the Company shall at all times have authorized and reserved for issuance sufficient shares of its Warrant Stock and other stock, securities and property to provide for the exercise of the rights represented by this Warrant.

3. Adjustment of Exercise Price and Number of Shares. Subject to the provisions of Section 9 hereof, the Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 3 as follows:

(a) Reclassification. In case of any reclassification or change of the Common Stock (other than a change in par value, or as a result of a subdivision or combination or dividend or as otherwise as adjusted under this Section 3), the Company shall execute a new Warrant, providing that the holder of this Warrant shall have the right to exercise such new Warrant, and procure upon such exercise and payment of the same aggregate Exercise Price, in lieu of the shares of Common Stock theretofore issuable upon exercise of this Warrant, the kind and amount of shares of stock, other securities, money and property receivable upon such reclassification or change by a holder of an equivalent number of shares of Common Stock. Such new Warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Section 3. Except for a Liquidation Event (as defined in Section 9), the provisions of this subsection (a) shall similarly apply to successive reclassifications and changes.

(b) Stock Splits and Combinations. If the Company, at any time while this Warrant is outstanding (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares, or (iii) combines its outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this Section 3(b) shall become effective immediately after the effective date of such subdivision or combination.

(c) Pro Rata Distributions. If the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph), (iii) rights or warrants to subscribe for or purchase any security, or (iv) any other asset (in each case, "**Distributed Property**"), then, upon any exercise of this Warrant that occurs after the record date fixed for determination of stockholders entitled to receive such distribution, the Holder shall be entitled to receive, in addition to the Warrant Stock shares otherwise issuable upon such exercise (if applicable), the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Stock shares had the Holder been the record holder of such Warrant Stock shares immediately prior to such record date.

(d) Number of Warrant Shares**.** Simultaneously with any adjustment to the Exercise Price pursuant to this Section 3, the number of Warrant Stock Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Stock Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

4. Notice of Adjustments. Whenever the number of shares of Warrant Stock purchasable hereunder or the Exercise Price thereof shall be adjusted pursuant to Section 3 hereof, the Company shall provide notice to the holder of this Warrant setting forth, in reasonable detail, the event requiring the adjustment, the amount of the adjustment, the method by which such adjustment was calculated, and the number of shares of Warrant Stock which may be purchased and the Exercise Price therefor after giving effect to such adjustment.

5. Fractional Shares. No fractional shares of Common Stock will be issued in connection with any exercise hereunder. In lieu of such fractional shares the Company shall make a cash payment therefor based upon the fair market value of the Warrant Stock then in effect as determined by the Company.

6. Restrictions Upon Transfer.

(a) The Company need not register a transfer of this Warrant unless the conditions specified in the legends on the front page hereof are satisfied and the transferee has agreed in writing to be subject to the terms and conditions of this Warrant, including transferee acknowledging in writing that it meets the investor suitability criteria set forth in this Warrant and Exhibit B attached hereto. Subject to the satisfaction of such conditions, any transfer of this Warrant and all rights hereunder, in whole or in part (but not less than 25% of the Warrant Stock originally exercisable under this Warrant being transferred), shall be registered on the books of the Company to be maintained for such purpose, upon surrender of this Warrant at the principal office of the Company, or the office or agency designated by the Company, together with a written assignment of this Warrant substantially in the form of Exhibit C hereto duly executed by Holder and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall, subject to the conditions set forth in this Section, execute and deliver a new Warrant in the name of the assignee, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be canceled.

(b) The Company shall prepare, issue and deliver at its own expense (other than transfer taxes) the new Warrant or Warrants under this Section 6.

7. Restrictive Legends.

(a) The shares of Warrant Stock issuable upon exercise of this Warrant (unless registered under the Securities Act of 1933, as amended (the "**Securities Act**")) shall be stamped or imprinted with legends in substantially the following form:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED SOLELY FOR INVESTMENT AND THE OFFER AND SALE OF SUCH SHARES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY STATE SECURITIES LAWS. SUCH SHARES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH SALE, OFFER, PLEDGE OR HYPOTHECATION IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE ACT AND OF ANY APPLICABLE STATE SECURITIES LAWS. COPIES OF THE AGREEMENT COVERING THE PURCHASE OF THESE SHARES AND RESTRICTING THEIR TRANSFER MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDER OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF THE CORPORATION AT THE PRINCIPAL EXECUTIVE OFFICES OF THE CORPORATION.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FROM THE EFFECTIVE DATE OF THE CORPORATION'S FIRST UNDERWRITTEN PUBLIC OFFERING AS MORE FULLY PROVIDED IN THE WARRANT TO WHICH THESE SECURITIES WERE ISSUED.

(b) The Company need not register a transfer of shares of Warrant Stock bearing the restrictive legends set forth in this Section 7, unless the conditions specified in such legends are satisfied. The Company may also instruct its transfer agent not to register the transfer of the shares of Warrant Stock, unless all of the conditions specified in the legends set forth in this Section 7 are satisfied.

8. Rights of Stockholders. No holder of this Warrant shall be entitled, as a Warrant holder, to vote or receive dividends or be deemed the holder of Common Stock or any other securities of the Company which may at any time be issuable on the exercise hereof for any purpose, nor shall anything contained herein be construed to confer upon the holder of this Warrant, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action (whether upon any recapitalization, issuance of stock, reclassification of stock, change of par value, consolidation, merger, conveyance, or otherwise) or to receive notice of meetings, or to receive dividends or subscription rights or otherwise until the Warrant shall have been exercised and the shares of Warrant Stock purchasable upon the exercise hereof shall have become deliverable, as provided herein.

9. Expiration of Warrant. Subject to the notice provisions set forth below in the event of a "Liquidation Event" (as defiend below), this Warrant shall expire and shall no longer be exercisable immediately prior to the first to occur of the following (the "Expiration Date"):

(a) at 5:00 p.m., Pacific time, on December 31, 2017;

(b) the closing of a merger, reorganization, tender offer or similar transaction involving the Company or its securities with or into another entity in which the holders of voting securities of the Company immediately prior to such transaction will hold less than 50% of the voting securities of the surviving entity immediately following such transaction as a result of shares held prior to such transaction;

(c) the closing of a sale of all or substantially all of the assets of the Company; and

(d) any "Deemed Liquidation Event" as set forth in the Company's Amended and Restated Certificate of Incorporation ("COI") in existence as of December, 2014 (excluding any right of the Company's Series A Preferred Stock holders to opt out of such Deemed Liquidation Event as provided in the COI).

Each of 9(b) through (d), collectively, a "Liquidation Event."

Upon written notice from the Company to Holder provided at least seven (7) calendar days prior to a Liquidation Event notifying Holder of the material financial terms of the Liquidation Event, Holder may elect prior to the Expiration Date to exercise all but not less than all of the purchase rights represented by this Warrant in accordance with the procedures set forth in Section 1 above.

10. Market Standoff. In connection with the initial public offering of the Company's securities and upon request of the Company or the underwriters managing such offering of the Company's securities, Holder (and any assignee) hereby agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed 180 days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the Company's initial public offering. Notwithstanding the foregoing, if during the last 17 days of the restricted period, the Company issues an earnings release or material news or a material event relating to the Company occurs, or prior to the expiration of the restricted period the Company announces that it will release earnings results during the 16-day period beginning on the last day of the restricted period, then, upon the request of the managing

underwriter, to the extent required by any FINRA rules, the restrictions imposed by this subsection shall continue to apply until the end of the third trading day following the expiration of the 15-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event. In no event will the restricted period extend beyond 216 days after the effective date of the registration statement. Holder acknowledges that such a lock-up agreement has been requested by the Company as a condition to the issuance of this Warrant and Holder shall execute and deliver to the Company and its underwriters such lock-up agreement.

11. Notices, Etc. Any notice, request or other communications required or permitted hereunder shall be in writing and shall be deemed duly given if given in the manner provided in the Purchase Agreement to the address specified therein or to such other address that the Company or the Holder may specify pursuant to the terms thereof.

12. Governing Law, Headings. This Warrant shall be construed and enforced in accordance with and governed by the laws of the State of Delaware with venue for all purposes in the State of Delaware. The headings in this Warrant are for purposes of reference only, and shall not limit or otherwise affect any of

the terms hereof.

13. Amendment and Waiver. This Warrant may be amended or modified, and the obligations of the Company and the rights of each Holder under this Warrant may be waived, amended or terminated, only upon the written consent of the Company and the Holder.

14. Holder Representations & Warranties. Holder hereby represents and warrants to the Company as follows in addition to Holder's representations and warranties under Section 3 of the Purchase Agreement:

(a) Holder understands that no public market currently exists for the Warrant or Warrant Stock (collectively, the "Securities") and that there are no assurances that any such market will be created.

(b) Holder specifically acknowledges and understands that certificates representing the Securities will bear substantially all of the legends set forth in this Warrant.

(c) Holder has full power and authority to deliver these representations and warranties in relation to the Holder's purchase of the Securities.

(d) Holder is an "accredited" investor as that term is defined under Regulation D promulgated under the Securities Act of 1933, as amended (as more fully set forth on Annex I attached hereto) neither Holder nor any person or entity with whom Holder shares beneficial ownership of the Company's securities, is subject to any of the "Bad Actor" disqualifications described in Rule 506(d)(1)(i) to (viii) under the Securities Act, attached hereto as Annex II.

(e) Holder acknowledges that the Company is relying on the accuracy of the above representations and is entitled to rely on the truth and accuracy of the foregoing representations and warranties and that the foregoing representations and warranties will survive Holder's admission as a Holder of the Company.

(f) Holder represents and warrants that the above acknowledgements, representations and agreements are true and accurate as of the date hereof.

(Remainder of Page Intentionally Left Blank)

IN WITNESS WHEREOF, the Company and Holder have each caused this Warrant to be executed as set forth below.

JAGUAR ANIMAL HEALTH, INC.
a Delaware corporation

Jaguar Animal Health, Inc.
185 Berry Street
Suite 1300
San Francisco, CA 94107
Attn: John Kallsassy, CFO
jkallassy@jaguaranimalhealth.com

By: /s/ John A. Kallassy

Name: John A. Kallassy

Title: CFO

HOLDER:
Agreed & Accepted:

By: /s/ Ian Page
(Signature)

Ian Page, CEO
(Print Name & Title)

Signature Page to Jaguar Animal Health Warrant

EXHIBIT A

NOTICE OF EXERCISE

TO: JAGUAR ANIMAL HEALTH, INC.
Attention: Chief Financial Officer

The undersigned hereby elects to purchase shares of Common Stock of JAGUAR ANIMAL HEALTH, INC. pursuant to the terms of the attached Warrant.

Method of Exercise (Please initial the applicable blank):

The undersigned elects to exercise the attached Warrant by means of a cash payment, and tenders herewith payment in full for the purchase price of the shares being purchased by wire transfer or cashier's check , together with all applicable transfer taxes, if any.

The undersigned hereby elects to exercise the attached Warrant pursuant to the terms of Section 1(c) of this Warrant, and to receive so many shares as a result as are properly calculated under that Section.

Please issue a certificate or certificates representing said shares in the name of the undersigned or in such other name as is specified below:

_____

(Name)

(Address)

The undersigned hereby represents and warrants that the aforesaid shares are being acquired for the account of the undersigned for investment and not with a view to, or for resale, in connection with the distribution thereof, and that the undersigned has no present intention of distributing or reselling such shares. In support thereof, the undersigned agrees to execute an Investment Representation Statement in a form substantially similar to the form attached to the Warrant as Exhibit B.

The undersigned hereby agrees that it shall not sell, offer, pledge, contract to sell, grant any option or contract to purchase, purchase any option or contract to sell, grant any right or warrant to purchase, lend or otherwise transfer or encumber, directly or indirectly, any securities of the Company as set forth in the Warrant.

_____

(Signature)

Date: _____

EXHIBIT B

INVESTMENT REPRESENTATION STATEMENT

PURCHASER :

COMPANY : JAGUAR ANIMAL HEALTH, INC.

SECURITY : COMMON STOCK ISSUED UPON EXERCISE OF THE WARRANT

AMOUNT : SHARES

DATE : , 20

In connection with the purchase of the above referenced shares (the "Securities"), the undersigned represents to the Company the following:

The undersigned is aware of the Company's business affairs and financial condition, and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. The undersigned is purchasing these Securities for its own account for investment purposes only and not with a view to, or for the resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933, as amended (the "**Securities Act**").

The undersigned understands that offer and sale of the Securities have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the undersigned's investment intent as expressed herein. In this connection, the undersigned understands that, in the view of the Securities and Exchange Commission (the "**SEC**"), the statutory basis for such exemption may be unavailable if this representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future.

The undersigned further understands that the Securities must be held indefinitely unless the offer and sale of the Securities are subsequently registered under the Securities Act or unless an exemption from registration is otherwise available. Moreover, the undersigned understands that the Company is under no obligation to register the offer and sale of the Securities. In addition, the undersigned understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless the offer and sale of the Securities are registered or such registration is not required in the opinion of counsel for the Company.

The undersigned is familiar with the provisions of Rule 144, promulgated pursuant to the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions.

The Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires, among other things, the existence of a public market for the Securities, the availability of certain current public information about the Company, the resale occurring not less than one year

after a party has purchased and paid for the security to be sold, the sales being effected through a "broker's transaction" or in transactions directly with a "market maker" and the number of Securities being sold during any three-month period not exceeding specified limitations.

The undersigned further understands that in the event that all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rule 144 is not exclusive, the Staff of the SEC has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk.

The undersigned hereby ratifies and confirms all of the original Holder's representations and warranties set forth in Section 14 of the Warrant, including but not limited to that the undersigned is an "Accredited Investor" as set forth in the Warrant and is not a "Bad Actor" as set forth in the Warrant and if the undersigned is not a United States person as defined by Section 7701(a)(30) of the Internal Revenue Code of 1986, as amended (the "***Code***")), Holder hereby represents that Holder has satisfied itself as to the full observance of the laws of its jurisdiction in connection with any invitation to subscribe for the Securities or any use of the Warrant, including (i) the legal requirements within its jurisdiction for the purchase of the Securities, (ii) any foreign exchange restrictions applicable to such purchase, (iii) any government or other consents that may need to be obtained in connection with such purchase, and (iv) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale or transfer of the Securities. Holder's purchase and payment for and continued beneficial ownership of the Warrant Stock will not violate any applicable securities or other laws of Holder's jurisdiction. Holder acknowledges that no representations or warranties, oral or written, have been made by the Company or any agent thereof in connection with Holder's exercise of this Warrant.

_____
(Signature)

Date: _____

EXHIBIT C

FORM OF TRANSFER

(To be signed only upon transfer of Warrant)

FOR VALUE RECEIVED, the undersigned hereby sells, assigns and transfers unto the right represented by the attached Warrant to purchase * shares of Common Stock of JAGUAR ANIMAL HEALTH, INC. (the "Company"), to which the attached Warrant relates, and appoints all executive officers of the Company as Attorney to transfer such right on the books of JAGUAR ANIMAL HEALTH, INC., with full power of substitution in the premises.

Dated: _____

_____
(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

(Address)

Signed in the presence of:

_____

_____

*Insert here the number of shares without making any adjustment for additional shares of Common Stock or any other stock or other securities or property or cash which, pursuant to the adjustment provisions of the Warrant, may be deliverable upon exercise.

ANNEX I

Holder is an "Accredited Investor" as that term is defined in Regulation D promulgated by the Securities and Exchange Commission. The term "Accredited Investor" under Regulation D refers to:

A person or entity who is a director or executive officer of the Company;

Any bank as defined in Section 3(a)(2) of the Securities Act, or any savings and loan association or other institution as defined in Section 3(a)(5)(A) of the Securities Act whether acting in its individual or fiduciary capacity; any broker or dealer registered pursuant to Section 15 of the Exchange Act; insurance Corporation as defined in Section 2(13) of the Securities Act; investment Corporation registered under the Investment Corporation Act of 1940; or a business development Corporation as defined in Section 2(a)(48) of that Act; Small Business Investment Corporation licensed by the U.S. Small Business Administration

under Section 301(c) or (d) of the Small Business Investment Act of 1958; any plan established and maintained by a state, its political subdivisions, or any agency or instrumentality of a state or its political subdivisions for the benefit of its employees, if such plan has total assets in excess of $5,000,000; employee benefit plan within the meaning of the Employee Retirement Income Security Act of 1974, if the investment decision is made by a plan fiduciary, as defined in Section 3(21) of such Act, which is either a bank, savings and loan association, insurance Corporation, or registered investment adviser, or if the employee benefit plan has total assets in excess of $5,000,000 or, if a self-directed plan, with investment decision made solely by persons that are accredited investors;

Any private business development Corporation as defined in Section 202(a)(22) of the Investment Advisers Act of 1940;

Any organization described in Section 501(c)(3) of the Internal Revenue Code, corporation, Massachusetts or similar business trust, or partnership, not formed for the specific purpose of acquiring the Securities offered, with total assets in excess of $5,000,000;

Any natural person whose individual net worth, or joint net worth with that person's spouse, exclusive of value of principal residence at the time of his purchase exceeds $1,000,000;

Any natural person who had an individual income in excess of $200,000 during each of the previous two years or joint income with that person's spouse in excess of $300,000 in each of those years and has a reasonable expectation of reaching the same income level in the current year;

Any trust, with total assets in excess of $5,000,000, not formed for the specific purpose of acquiring the Securities offered, whose purchase is directed by a person who has such knowledge and experience in financial and business matters that he is capable of evaluating the merits and risks of the prospective investment; or

Any entity in which all of the equity owners are accredited investors.

As used in this Annex I, the term "net worth" means the excess of total assets over total liabilities. For the purpose of determining a person's net worth, the principal residence owned by an individual shall be excluded. As used hrein, "income" means actual economic income, which may differ from adjusted gross income for income tax purposes. Accordingly, the undersigned should consider whether it should add any or all of the following items to its adjusted gross income for income tax purposes in order to reflect more accurately its actual economic income: Any amounts attributable to tax-exempt income received, losses claimed as a limited partner in any limited partnership, deductions claimed for depletion, contributions to an IRA or Keogh retirement plan, and alimony payments.

Annex II

Rule 506(d)(1)(i) to (viii) under the Securities Act of 1933, as amended

(i) Has been convicted, within ten years before such sale (or five years, in the case of issuers, their predecessors and affiliated issuers), of any felony or misdemeanor:

(A) In connection with the purchase or sale of any security;
(B) Involving the making of any false filing with the Commission; or
(C) Arising out of the conduct of the business of an underwriter, broker, dealer, municipal securities dealer, investment adviser or paid solicitor of purchasers of securities;

(ii) Is subject to any order, judgment or decree of any court of competent jurisdiction, entered within five years before such sale, that, at the time of such sale, restrains or enjoins such person from engaging or continuing to engage in any conduct or practice:

(A) In connection with the purchase or sale of any security;
(B) Involving the making of any false filing with the Commission; or
(C) Arising out of the conduct of the business of an underwriter, broker, dealer, municipal securities dealer, investment adviser or paid solicitor of purchasers of securities;

(iii) Is subject to a final order of a state securities commission (or an agency or officer of a state performing like functions); a state authority that supervises or examines banks, savings associations, or credit unions; a state insurance commission (or an agency or officer of a state performing like functions); an appropriate federal banking agency; the U.S. Commodity Futures Trading Commission; or the National Credit Union Administration that:

(A) At the time of such sale, bars the person from:
(1) Association with an entity regulated by such commission, authority, agency, or officer;
(2) Engaging in the business of securities, insurance or banking; or
(3) Engaging in savings association or credit union activities; or
(B) Constitutes a final order based on a violation of any law or regulation that prohibits fraudulent, manipulative, or deceptive conduct entered within ten years before such sale;

(iv) Is subject to an order of the Commission entered pursuant to section 15(b) or 15B(c) of the Securities Exchange Act of 1934 (15 U.S.C. 78o(b) or 78o-4(c)) or section 203(e) or (f) of the Investment Advisers Act of 1940 (15 U.S.C. 80b-3(e) or (f)) that, at the time of such sale:

(A) Suspends or revokes such person's registration as a broker, dealer, municipal securities dealer or investment adviser;
(B) Places limitations on the activities, functions or operations of such person; or
(C) Bars such person from being associated with any entity or from participating in the offering of any penny stock;

(v) Is subject to any order of the Commission entered within five years before such sale that, at the time of such sale, orders the person to cease and desist from committing or causing a violation or future violation of:

(A) Any scienter-based anti-fraud provision of the federal securities laws, including without limitation section 17(a)(1) of the Securities Act of 1933 (15 U.S.C. 77q(a)(1)), section 10(b) of the Securities Exchange Act of 1934 (15 U.S.C. 78j(b)) and 17 CFR 240.10b-5, section 15(c)(1) of the Securities Exchange Act of 1934 (15 U.S.C. 78o(c)(1)) and section 206(1) of the Investment Advisers Act of 1940 (15 U.S.C. 80b-6(1)), or any other rule or regulation thereunder; or
(B) Section 5 of the Securities Act of 1933 (15 U.S.C. 77e).

(vi) Is suspended or expelled from membership in, or suspended or barred from association with a member of, a registered national securities exchange or a registered national or affiliated securities association for any act or omission to act constituting conduct inconsistent with just and equitable principles of trade;

(vii) Has filed (as a registrant or issuer), or was or was named as an underwriter in, any registration statement or Regulation A offering statement filed with the Commission that, within five years before such sale, was the subject of a refusal order, stop order, or order suspending the Regulation A exemption, or is, at the time of such sale, the subject of an investigation or proceeding to determine whether a stop order or suspension order should be issued; or

(viii) Is subject to a United States Postal Service false representation order entered within five years before such sale, or is, at the time of such sale, subject to a temporary restraining order or preliminary injunction with respect to conduct alleged by the United States Postal Service to constitute a scheme or device for obtaining money or property through the mail by means of false representations.

Exhibit 10.40

FORM OF JAGUAR ANIMAL HEALTH, INC. WARRANT EXERCISE AMENDMENT

WHEREAS, on, or about, December 3, 2014, Jaguar Animal Health, Inc., a Delaware corporation (the Company") issued an Exchange Warrant to Purchase Common Stock (the "Warrant") to the undersigned (the "Holder") pursuant to a "Credit Agreement" (as defined in the Warrant);

WHEREAS, Holder and the Company desire to amend the "Exercise Price" and adjust the "Commencement Date" and "Expiration Date" under the Holder's Warrant (as such terms are defined under the Warrant) to facilitate the "Company's IPO" (as defined below);

NOW THEREFORE, the undersigned Holder and the Company hereby agree that the "Exercise Price" and "Expiration Date" under the Warrant are hereby amended in their entirety to read as follows by (i) replacing the first paragraph of the Warrant in its entirety with the following first paragraph; (ii) amending in its entirety the definition of "Exercise Price" under Section 1 of the Warrant; and (iii) adding the definition of "Liquidity Event" to Section 1 of the Warrant; and to read as follows:

"JAGUAR ANIMAL HEALTH, INC., a Delaware corporation (the "**Company**"), hereby certifies that, for value received, GPB Life Science Holdings LLC, or its permitted assigns (the "**Holder**"), is entitled to purchase from the Company that whole number of shares of common stock, par value $0.0001 per share (the "**Common Stock**") of the Company as determined by dividing $500,000 by the Exercise Price (as defined below) (each such share, a "**Warrant Share**" and all such shares, the "**Warrant Shares**") at an exercise price per share equal to the Exercise Price. This Warrant may be exercised at any time and from time to time commencing on the date six (6) months from December 3, 2014 (the "**Commencement Date**"), and through and including the earlier to occur of (x) 5:00 P.M., New York City time, on the fifth anniversary of the Commencement Date and (y) 5:00 P.M. New York City time on the date immediately prior to a "Liquidation Event" (as defined below) (the earliest of (x) and (y) shall be (the "**Expiration Date**"), subject to the following terms and conditions:"

"Exercise Price" means, subject to adjustment under Section 9 below, (i) upon the closing of the sale of shares by the Company of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, on, or before, June 30, 2015 (the "**IPO**"), the Exercise Price shall be equal to $5.60 per share and (ii) if the Company has not consummated the IPO on, or before, June 30, 2015, then the Exercise Price shall thereafter be $2.696 per share.

"Liquidation Event" means (x) the closing of a merger, reorganization, tender offer or similar transaction involving the Company or its securities with or into another entity in which the holders of voting securities of the Company immediately prior to such transaction will hold less than 50% of the voting securities of the surviving entity immediately following such transaction as a result of shares held prior to such transaction and (y) the closing of a sale of all or substantially all of the assets of the Company.

The undersigned have executed this Warrant Exercise Amendment effective as of March , 2015.

Holder:

By: _____
(Signature)

_____
(Print Name and Title)

Company:
By: _____
(Signature)

_____
(Print Name and Title)

Exhibit 10.41

THIS WARRANT AND ANY COMMON STOCK ISSUED UPON THE EXERCISE OF THIS WARRANT HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS, AND MAY NOT BE OFFERED, SOLD, OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN APPLICABLE EXEMPTION THEREFROM, AS EVIDENCED BY A LEGAL OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY TO SUCH EFFECT. NOTWITHSTANDING THE FOREGOING, THIS WARRANT AND THE COMMON STOCK ISSUABLE UPON EXERCISE OF THIS WARRANT MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY SUCH SECURITIES.

JAGUAR ANIMAL HEALTH, INC.

FORM OF AMENDED AND RESTATED EXCHANGE WARRANT TO PURCHASE COMMON STOCK

Warrant No.

Original Issue Date: December 3, 2014
Amended and Restated Date: March 17, 2015

JAGUAR ANIMAL HEALTH, INC., a Delaware corporation (the "**Company**"), hereby certifies that, for value received, , or its permitted assigns (the "**Holder**"), is entitled to purchase from the Company that whole number of shares of common stock, par value $0.0001 per share (the "**Common Stock**") of the Company as determined by dividing $250,000 by the Exercise Price (as defined below) (each such share, a "Warrant Share" and all such shares, the "**Warrant Shares**") at an exercise price per share equal to the Exercise Price. This Warrant may be exercised at any time and from time to time commencing on the date six (6) months from December 3, 2014 (the "**Commencement Date**"), and through and including the earlier to occur of (x) 5:00 P.M., New York City time, on the fifth anniversary of the Commencement Date and (y) 5:00 P.M. New York City time on the date immediately prior to a "Liquidation Event" (as defined below) (the earliest of (x) and (y) shall be (the "**Expiration Date**"), subject to the following terms and conditions:

This Warrant (this "**Warrant**") is one of two (2) substantially similar warrants originally issued to the Lenders pursuant to the Credit Agreement.

1. Definitions. All capitalized terms used in this Warrant but not otherwise defined in this Warrant shall have the meaning set forth in the Credit Agreement. In addition to the terms defined elsewhere in this Warrant, the following terms shall have the following meanings:

"**Credit Agreement**" means that Amended and Restated Standby Bridge Financing Agreement dated as of December 3, 2014, by and among, 31 Group, LLC, GPB Life Science Holdings LLC and Jaguar Animal Health, Inc.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

"**Exercise Price**" means, subject to adjustment under Section 9 below, (i) upon the closing of the sale of shares by the Company of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, on, or before, June 30, 2015 (the "**IPO**"), the Exercise Price shall be equal to $5.60 per share and (ii) if the Company has not consummated the IPO on, or before, June 30, 2015, then the Exercise Price shall thereafter be $2.696 per share.

"**Liquidation Event**" means (x) the closing of a merger, reorganization, tender offer or similar transaction involving the Company or its securities with or into another entity in which the holders of voting securities of the Company immediately prior to such transaction will hold less than 50% of the voting securities of the surviving entity immediately following such transaction as a result of shares held prior to such transaction and (y) the closing of a sale of all or substantially all of the assets of the Company.

"**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

"**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

2. Registration of Warrant. The Company on the Closing Date shall register this Warrant, upon records to be maintained by the Company for that purpose (the "**Warrant Register**"), in the name of the record Holder (which shall include the initial Holder or, as the case may be, any registered assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company may deem and treat the registered Holder as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary. The initial address until changed as provided in this Warrant, shall be the address of the Holder provided in the Credit Agreement.

3. Transfers. The Company need not register a transfer of this Warrant unless the conditions specified in the legends on the front page hereof are satisfied and the transferee has agreed in writing to be subject to the terms and conditions of this Warrant, including transferee acknowledging in writing that it meets the investor suitability criteria set forth in this Warrant and Exhibit C attached hereto. The registered Holder of this Warrant agrees by his, her or its acceptance hereof, that neither this Warrant nor any Warrant Shares issued upon exercise of this Warrant shall be sold, transferred, assigned, pledged or hypothecated by any Person prior to the Commencement Date. On or after the Commencement Date, transfer of this Warrant may be made, subject to the restrictions on transfer set forth in this Warrant and compliance with all applicable securities laws and the Company shall register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, with the Form of Assignment (an "**Assignment**") attached as Exhibit A hereto duly completed and signed, to the Company at its address specified in Section 13. No ink original of any Assignment shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Assignment be required. Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a "**New Warrant**") evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations of a Holder of a Warrant.

4. Exercise and Duration of Warrant.

(a) Subject to Holder executing and complying with Exhibit C and Section 17 below, all or any part of this Warrant shall be exercisable, in whole or in part, by the registered Holder at any time and from time to time on or after the Commencement Date and through and including 5:00 p.m., New York City time, on the Expiration Date. At 5.00 p.m., New York City time, on the Expiration Date, this Warrant shall be terminated and no longer outstanding; provided, however that, notwithstanding the

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foregoing, without any further action by or on behalf of the Holder, this Warrant shall automatically be deemed to be exercised in full pursuant to the net exercise provisions of Section 10 effective immediately prior to such termination.

(b) Subject to Holder executing and complying with Exhibit C and Section 17 below, the Holder may exercise this Warrant, not later than 5:00 p.m., New York City time, on any Business Day following the Original Issue Date and prior to the Expiration Date, by delivering to the Company (i) an exercise notice, in the form attached as Exhibit B hereto (the "**Exercise Notice**"), appropriately completed and duly signed, (ii) the Investment Representation Statement in the form attached as Exhibit C hereto, appropriately completed and duly signed, and (iii) payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a "cashless exercise" if so indicated in the Exercise Notice and if a "cashless exercise" may occur at such time pursuant to Section 10), and the date such items are delivered to the Company (as determined in accordance with the notice provisions hereof) is an "**Exercise Date**." If the Exercise Notice is received by the Company after 5:00 p.m., New York City time, on the specified Exercise Date, this Warrant will be deemed to be received and exercised on the Trading Day next succeeding the Exercise Date. The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares. No ink original of any Exercise Notice shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Exercise Notice be required.

5. Delivery of Warrant Shares.

(a) Subject to Section 11 below, upon exercise of this Warrant, the Company shall promptly (but in no event later than three Trading Days (as defined below) after the Exercise Date) issue or cause to be issued and cause to be delivered to or upon the written order of the Holder and in such name or names as the Holder may designate, a certificate for the Warrant Shares issuable upon such exercise.. The Holder, or any Person permissibly so designated by the Holder to receive Warrant Shares, shall be deemed to have become the holder of record of such Warrant Shares as of the Exercise Date. If the Warrant Shares are eligible to be issued free of all restrictive legends in accordance with applicable state and federal securities laws and the terms and conditions of this Warrant, in lieu of delivering physical certificates representing the Warrant Shares issuable upon exercise, provided the Company's transfer agent is participating in The Depository Trust Company's Fast Automated Securities Transfer program, upon the written request of the Holder, the Company shall use its commercially reasonable efforts to deliver, or cause to be delivered, Warrant Shares hereunder electronically through The Depository Trust Company or another established clearing corporation performing similar functions, if available. "**Trading Day**" means any day on which the shares of Common Stock are traded on the NASDAQ Stock Market, or, if the NASDAQ Stock Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock are then traded; *provided* that "Trading Day" shall not include any day on which the Common Stock are scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock are suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time).

(b) If by the close of the third Trading Day after delivery of a properly completed Exercise Notice (and any other documents required pursuant to Section 5(a)), the Company fails to deliver to the Holder the required number of Warrant Shares in the manner required pursuant to Section 5(a), and if on or after the Trading Day immediately following such third Trading Day and prior to the receipt of such Warrant Shares, the Holder purchases (in an open market transaction or otherwise) shares

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of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "**Buy-In**"), then the Company shall, within three Trading Days after the Holder's request and in the Holder's sole discretion, either (i) pay in cash to the Holder an amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the "**Buy-In Price**"), at which point the Company's obligation to deliver such certificate (and to issue such Warrant Shares) shall terminate or (ii) promptly honor its obligation to deliver to the Holder Warrant Shares and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of Warrant Shares, times (B) the Closing Sales Price (as defined below) on the date of receipt of a properly completed Exercise Notice.

(c) To the extent permitted by law, the Company's obligations to issue and deliver Warrant Shares in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Nothing herein shall limit the Holder's right to pursue any other remedies available to the Holder hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver Common Stock upon exercise of this Warrant as required pursuant to the terms hereof.

6. Charges, Taxes and Expenses. Issuance and delivery of certificates for shares of Common Stock upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense in respect of the issuance of such certificates, all of which taxes and expenses shall be paid by the Company; provided, however, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares or Warrants in a name other than that of the Holder or an affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

7. Replacement of Warrant. If this Warrant is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable indemnity (which shall not include a surety bond), if requested. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to issue the New Warrant.

8. Reservation of Warrant Shares. The Company covenants that it will reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved shares of Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, one hundred percent (100%) of the number of Warrant Shares that are issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 9). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly

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and validly authorized, issued and fully paid and nonassessable. The Company will take all such action as may be necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed.

9. Certain Adjustments. At such time that the fixed Exercise Price has been established under this Warrant, the Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 9 as follows:.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding after the fixed Exercise Price has been established, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares, or (iii) combines its outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this Section 9(a) shall become effective immediately after the effective date of such subdivision or combination.

(b) Pro Rata Distributions. After the fixed Exercise Price has been established, if the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph), (iii) rights or warrants to subscribe for or purchase any security, or (iv) any other asset (in each case, "**Distributed Property**"), then, upon any exercise of this Warrant that occurs after the record date fixed for determination of stockholders entitled to receive such distribution, the Holder shall be entitled to receive, in addition to the Warrant Shares otherwise issuable upon such exercise (if applicable), the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Shares had the Holder been the record holder of such Warrant Shares immediately prior to such record date.

(c) Fundamental Transactions If, at any time while this Warrant is outstanding (i) the Company effects any merger or consolidation of the Company with or into another Person, in which the Company is not the survivor and the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least fifty percent (50%) of the voting securities of the surviving entity, (ii) the Company effects any sale of all or substantially all of its assets, or at least a majority of its Common Stock is acquired by a third party, in each case, in one or a series of related transactions, (iii) any tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which all or substantially all of the holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property, or (iv) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 9(a)) (in any such case, a "**Fundamental Transaction**"), then the Holder shall thereafter receive, upon exercise of this Warrant, in lieu of any Warrant Shares, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the "**Alternate Consideration**"). The Company shall not affect any such Fundamental

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Transaction unless prior to or simultaneously with the consummation thereof, any successor to the Company, surviving entity or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or entity shall assume the obligation to deliver to the Holder, such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to purchase and/or receive (as the case may be), and the other obligations under this Warrant. The provisions of this paragraph (c) shall similarly apply to subsequent transactions analogous to a Fundamental Transaction.

(d) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) and (e) of this Section, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(e) Calculations. All calculations under this Section 9 shall be made to the nearest cent or the nearest share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the sale or issuance of any such shares shall be considered an issue or sale of Common Stock.

(f) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 9, the Company at its expense will, at the written request of the Holder, promptly compute such adjustment, in good faith, in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder and to the Company's transfer agent.

(g) Notice of Corporate Events. If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then, except if such notice and the contents thereof shall be deemed to constitute material non-public information, the Company shall deliver to the Holder a notice describing the material terms and conditions of such transaction at least five Trading Days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction, and the Company will take all steps reasonably necessary in order to ensure that the Holder is given the practical opportunity to exercise this Warrant prior to such time so as to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice.

10. Payment of Exercise Price. The Holder shall pay the Exercise Price in immediately available funds; provided, however, that the Holder may, in its sole discretion, satisfy its obligation to pay the Exercise Price through a "cashless exercise," in which event the Company shall issue to the Holder the number of Warrant Shares determined as follows:

X = Y [(A-B)/A]

where:

X = the number of Warrant Shares to be issued to the Holder.

Y = the total number of Warrant Shares with respect to which this Warrant is being exercised in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

A = the average of the Closing Sale Prices of the shares of Common Stock (as reported by Bloomberg Financial Markets) for the five Trading Days ending on the date immediately preceding the Exercise Date.

B = the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

For purposes of this Warrant, "**Closing Sale Price**" means, for any security as of any date, the last trade price for such security on the principal trading market of the security, as reported by Bloomberg Financial Markets, or, if the principal trading market of the security begins to operate on an extended hours basis and does not designate the last trade price then the last trade price of such security prior to 4:00 p.m., New York City Time, as reported by Bloomberg, Financial Markets, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg Financial Markets, or, if no closing bid price is reported for such security by Bloomberg Financial Markets, the average of the bid prices and asked prices of any market makers for such security as reported in the "pink sheets" by OTC Markets Group Inc. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder in good faith. If the Company and the Holder are unable to agree upon the fair market value of such security, then the Company shall, within two business days submit via facsimile (a) the disputed determination of the Exercise Price to an independent, reputable investment bank selected by the Company and approved by the Holder (which approval shall not be unreasonably withheld, conditioned or delayed) or (b) the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause at its expense the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten business days from the time it receives the disputed determinations or calculations. Such investment bank's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

11. Beneficial Ownership.

a. Except as provided elsewhere in this Section 11(a) the Company shall not affect the exercise of this Warrant and the Holder shall not have the right to (a) exercise this Warrant into Warrant Shares but only to the extent that the number of Warrant Shares to be issued pursuant to such exercise would result, when aggregated with all other shares of Common Stock beneficially owned by such Holder at such time, in such Holder beneficially owning more than 4.99% of all of the Common Stock issued and outstanding at such time (the "**4.99% Limitation**"); provided, however, that upon the Holder providing the Company with sixty one (61) days prior written notice (the "**4.99% Waiver Notice**") that such Holder is waiving this Section with regard to any or all Warrant Shares issuable upon exercise of this Warrant, this Section 11(a) shall be of no force or effect with regard to those Warrant Shares referenced in the 4.99% Waiver Notice.

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b. Except as provided elsewhere in this Section 11(b) the Holder shall not have the right to exercise this Warrant into Warrant Shares but only to the extent that the number of Warrant Shares to be issued pursuant to such exercise would result, when aggregated with all other shares of Common Stock beneficially owned by such Holder at such time, in such Holder beneficially owning in excess of 9.99% of all of the shares of Common Stock issued and outstanding at such time (the "**9.99% Limitation**"); provided, however, that upon the Holder providing the Company with sixty one (61) days prior written notice (the "**9.99% Waiver Notice**") that the Holder is waiving this Section 11(b) with regard to any or all Warrant Shares issuable upon exercise of this Warrant, this Section 11(b) shall be of no force or effect with regard to those Common Stock referenced in the 9.99% Waiver Notice.

c. For purposes of this Section 11, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act taking into account the 4.99% Limitation and the 9.99% Limitation, as the case may be, and analogous provisions in and/or relevant to any other securities of the Company beneficially owned by the Holder. For purposes of this Warrant, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in the most recent of (i) the Company's most recent Form 10-K, Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission, as the case may be, (ii) a more recent public announcement by the Company or (iii) any other notice by the Company or the transfer agent setting forth the number of shares of Common Stock outstanding. For any reason at any time, upon the written or oral request of the Holder, the Company shall within two (2) business day confirm to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and its affiliates since the date as of which such number of outstanding shares of Common Stock was reported. For purposes of this Warrant, "**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

12. No Fractional Shares. No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares which would, otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the Closing Sale Price) for any such fractional shares.

13. Notices. All notices, requests, consents and other communications under this Warrant shall be in writing and shall be deemed to have been duly made when hand delivered, or mailed by express mail or private courier service: (i) if to the registered Holder of this Warrant, to the address of such Holder as shown on the Warrant Register, or (ii) if to the Company to the following address or to such other address as the Company may designate by notice to the Holder(s):

14. Warrant Agent. The Company shall initially serve as warrant agent under this Warrant. Upon thirty days' notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged or any entity resulting from any consolidation to which the Company or any new warrant agent shall be a party or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or stockholders services business shall be a successor warrant agent under this Warrant without any further

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act. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

15. Restrictive Legends.

a. The Warrant Shares issuable upon exercise of this Warrant (unless registered under the Securities Act of 1933, as amended (the "**Securities Act**")) or eligible to be issued free of all restrictive legends in accordance with applicable state and federal securities laws and the terms and conditions of this Warrant, shall be stamped or imprinted with legends in substantially the following form:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED SOLELY FOR INVESTMENT AND THE OFFER AND SALE OF SUCH SHARES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY STATE SECURITIES LAWS. SUCH SHARES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH SALE, OFFER, PLEDGE OR HYPOTHECATION IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE ACT AND OF ANY APPLICABLE STATE SECURITIES LAWS. COPIES OF THE AGREEMENT COVERING THE PURCHASE OF THESE SHARES AND RESTRICTING THEIR TRANSFER MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDER OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF THE CORPORATION AT THE PRINCIPAL EXECUTIVE OFFICES OF THE CORPORATION.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FROM THE EFFECTIVE DATE OF THE CORPORATION'S FIRST UNDERWRITTEN PUBLIC OFFERING AS MORE FULLY PROVIDED IN THE WARRANT TO WHICH THESE SECURITIES WERE ISSUED.

b. The Company need not register a transfer of Warrant Shares bearing the restrictive legends set forth in this Section 15, unless the conditions specified in such legends are satisfied. The Company may also instruct its transfer agent not to register the transfer of the Warrant Shares, unless all of the conditions specified in the legends set forth in this Section 15 are satisfied.

16. **Market Standoff**. In connection with the IPO, and upon request of the Company or the underwriters managing such offering of the Company's securities, Holder (and any assignee) hereby agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed 180 days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the Company's initial public offering. In addition, upon request of the Company or the underwriters managing a public offering of the Company's securities (other than the initial public offering), Holder hereby agrees to be bound by similar restrictions, and to sign a similar agreement, in connection with no more than one additional registration statement filed within 12 months after the closing date of the initial public offering, provided that the duration of the lock-up period with respect to such additional registration shall not exceed 90 days from the effective date of such additional

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registration statement. Notwithstanding the foregoing, if during the last 17 days of the restricted period, the Company issues an earnings release or material news or a material event relating to the Company occurs, or prior to the expiration of the restricted period the Company announces that it will release earnings results during the 16-day period beginning on the last day of the restricted period, then, upon the request of the managing underwriter, to the extent required by any FINRA rules, the restrictions imposed by this subsection shall continue to apply until the end of the third trading day following the expiration of the 15-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event. In no event will the restricted period extend beyond 216 days after the effective date of the registration statement and in no event shall Holders lock-up period as provided herein be any longer than the shortest lock-up period agreed to by any other holder of Company securities. Except for compliance by Holder with respect to the first sentence of this Section 16 in connection with the IPO, whereby all officers, directors and holders of 1% or more of the issued and outstanding Common Stock likewise enter into identical agreements reflecting the provisions in such first sentence, notwithstanding anything to the contrary, provided herein, or elsewhere, this Section 16 shall only apply to the Warrant Shares if all other warrants and options of the Company whether currently outstanding or issued in the future either (x) contain the same provisions as set forth in this Section 16, and all officers, directors and holders of 1% or more of the issued and outstanding Common Stock and their affiliates (the "Lock-Up Persons") enter into identical provisions as to this Section 16 with respect to all shares of Common Stock owned beneficially and/or of record by all such persons and (y) the Lock-Up Persons enter into identical restrictions with respect to all shares of Common Stock owned beneficially and/or of record by all such Lock-Up Persons. In the event any and all of the Lock-Up Persons enter into such agreements or have identical provisions in their warrants and/or options, but any of such Lock-Up Persons are released in whole or in part from such agreement and/or provisions, then the provisions of this Section 16 shall be automatically terminated and null and void.

17. **Holder Representations & Warranties**. Holder hereby represents and warrants to the Company as follows:

a. Holder understands that no public market currently exists for the Warrant or Warrant Shares (collectively, the "Securities") and that there are no assurances that any such market will be created.

b. Holder specifically acknowledges and understands that certificates representing the Securities will bear substantially all of the legends set forth in this Warrant, in addition to any other legends required by this Warrant or otherwise.

c. Holder has full power and authority to deliver these representations and warranties in relation to the Holder's purchase of the Securities.

d. Holder is an "accredited" investor as that term is defined under Regulation D promulgated under the Securities Act of 1933, as amended, and neither Holder nor any person or entity with whom Holder shares beneficial ownership of the Company's securities, is subject to any of the "Bad Actor" disqualifications described in Rule 506(d)(1)(i) to (viii) under the Securities Act.

e. Holder acknowledges that the Company and is entitled to rely on the truth and accuracy of the foregoing representations and warranties and that the foregoing representations and warranties will survive Holder's admission as a Holder of the Company.

f. Holder represents and warrants that the above acknowledgements, representations and agreements are true and accurate as of the date hereof. Holder also agrees to inform the

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Company should any of the information contained in these representations and warranties cease to be true and/or accurate. Holder acknowledges that in the event it does not inform the Company of any change to the information contained in these representations and warranties, the Company and its respective professional advisers will be entitled to continue to rely on the truth and accuracy of the foregoing representations and warranties until and including the date the Holder purchases the Securities.

18. Miscellaneous.

(a) No Rights as a Stockholder. The Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 18(a), the Company shall provide the Holder with copies of the same notices and other information given to the stockholders of the Company, contemporaneously with the giving thereof to the stockholders.

(b) Successors and Assigns. Subject to compliance with applicable securities laws and the terms of this Warrant, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company except to a successor in interest and/or as otherwise required as a result of a Fundamental Transaction). This Warrant shall be binding on and inure to the benefit of the parties hereto and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant. Any attempted assignment in violation of this Section 18(b) shall be null and void.

(c) Amendment and Waiver. The Warrants, including this Warrant, may be amended, modified or supplemented, and waiver or consents to departures from the provisions of the Warrants may be given, if the Company and the holders of outstanding Warrants representing at least a majority of the shares of Common Stock purchasable under the outstanding Warrants consent to such amendment, modification, supplement, waiver or consent. Such consent may be effected by any available legal means, including without limitation at a special or regular meeting, by written consent or otherwise.

(d) Non-circumvention. The Company hereby covenants and agrees that the Company will not, by amendment of its corporate charter, bylaws or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities or any other voluntary action, seek to avoid the observance or performance of any of the terms of this Warrant and will at all times in good faith carry out all the provisions of this Warrant. Without limiting the generality of the foregoing, the Company shall not increase the par value of any shares of Common Stock receivable upon exercise of this Warrant above the Exercise Price then in effect.

(e) Governing Law; Jurisdiction. This Warrant shall be governed by and construed solely and exclusively in accordance with the internal laws of the State of New York without regard to the conflicts of laws principles thereof. The parties hereto hereby expressly and irrevocably agree that any

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suit or proceeding arising directly and/or indirectly pursuant to or under this Warrant shall be brought solely in a federal or state court located in the City, County and State of New York. By its execution hereof, the parties hereby covenant and irrevocably submit to the in personam jurisdiction of the federal and state courts located in the City, County and State of New York and agree that any process in any such action may be served upon any of them personally, or by certified mail or registered mail upon them or their agent, return receipt requested, with the same full force and effect as if personally served upon them in New York City. The parties hereto expressly and irrevocably waive any claim that any such jurisdiction is not a convenient forum for any such suit or proceeding and any defense or lack of in personam jurisdiction with respect thereto. In the event of any such action or proceeding, the party prevailing therein shall be entitled to payment from the other party hereto of all of its reasonable counsel fees and disbursements.

(f) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(g) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the parties will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[Signature page follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

JAGUAR ANIMAL HEALTH, INC.

By: _____
Name: Lisa A. Conte
Title: President and Chief Executive Officer

ACCEPTED AND AGREED TO
BY THE HOLDER

[ ]

By: _____
Its: _____

(Signature Page to Amended and Restated Exchange Warrant to Purchase Common Stock)

EXHIBIT A

Form of Assignment [SUBJECT TO EXHIBIT C]

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Dated: ,

Holder's Signature: _____

Holder's Address: _____

EXHIBIT B

Form of Exercise Notice

(To be executed by the Holder to purchase shares of Common Stock
under the foregoing Warrant)

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. (the "**Warrant**") issued by Jaguar Animal Health, Inc., a Delaware corporation (the "**Company**"). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase Warrant Shares pursuant to the Warrant.

(3) The Holder shall pay the sum of $ in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares in accordance with the terms of the Warrant and, after delivery of such Warrant Shares, Warrant Shares remain subject to the Warrant.

The undersigned hereby represents and warrants that the aforesaid shares are being acquired for the account of the undersigned for investment and not with a view to, or for resale, in connection with the distribution thereof, and that the undersigned has no present intention of distributing or reselling such shares. In support thereof, the undersigned agrees to execute an Investment Representation Statement in a form substantially similar to the form attached to the Warrant as Exhibit C.

The undersigned hereby agrees that it shall not sell, offer, pledge, contract to sell, grant any option or contract to purchase, purchase any option or contract to sell, grant any right or warrant to purchase, lend or otherwise transfer or encumber, directly or indirectly, any securities of the Company as set forth in the Warrant.

Dated: _____

Name of Holder:

By: _____

Name: _____

Title: _____

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)

EXHIBIT C

INVESTMENT REPRESENTATION STATEMENT

PURCHASER :

COMPANY : JAGUAR ANIMAL HEALTH, INC.

SECURITY : COMMON STOCK ISSUED UPON EXERCISE OF THE WARRANT ISSUED ON [DECEMBER 3], 2014

AMOUNT : SHARES

DATE : , 20

In connection with the purchase of the above referenced shares (the "Securities"), the undersigned represents to the Company the following:

The undersigned is aware of the Company's business affairs and financial condition, and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. The undersigned is purchasing these Securities for its own account for investment purposes only and not with a view to, or for the resale in connection with, any "distribution" thereof for purposes of the Securities Act of 1933, as amended (the "**Securities Act**").

The undersigned understands that the offer and sale of the Securities have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of the undersigned's investment intent as expressed herein. In this connection, the undersigned understands that, in the view of the Securities and Exchange Commission (the "**SEC**"), the statutory basis for such exemption may be unavailable if this representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future.

The undersigned further understands that the Securities must be held indefinitely unless the offer and sale of the Securities are subsequently registered under the Securities Act or unless an exemption from registration is otherwise available. Moreover, the undersigned understands that the Company is under no obligation to register the offer and sale of the Securities. In addition, the undersigned understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless the offer and sale of the Securities are registered or such registration is not required in the opinion of counsel for the Company.

The undersigned is familiar with the provisions of Rule 144, promulgated pursuant to the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions.

The Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires, among other things, the existence of a public market for the Securities, the availability of certain current public information about the Company, the resale occurring not less than one year after a party has purchased and paid for the security to be sold, the sales being effected through a

"broker's transaction" or in transactions directly with a "market maker" and the number of Securities being sold during any three-month period not exceeding specified limitations.

The undersigned further understands that in the event that all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rule 144 is not exclusive, the Staff of the SEC has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk.

The undersigned hereby ratifies and confirms all of the original Holder's representations and warranties set forth in Section 17 of the Warrant, including but not limited to that the undersigned is an "Accredited Investor" as set forth in the Warrant and is not a "Bad Actor" as set forth in the Warrant and if the undersigned is not a United States person as defined by Section 7701(a)(30) of the Internal Revenue Code of 1986, as amended (the "**Code**")), Holder hereby represents that Holder has satisfied itself as to the full observance of the laws of its jurisdiction in connection with any invitation to subscribe for the Securities or any use of the Warrant, including (i) the legal requirements within its jurisdiction for the purchase of the Securities, (ii) any foreign exchange restrictions applicable to such purchase, (iii) any government or other consents that may need to be obtained in connection with such purchase, and (iv) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale or transfer of the Securities. Holder's purchase and payment for and

continued beneficial ownership of the Warrant Stock will not violate any applicable securities or other laws of Holder's jurisdiction. Holder acknowledges that no representations or warranties, oral or written, have been made by the Company or any agent thereof in connection with Holder's exercise of this Warrant.

_____

(Signature)

Date: _____

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
Jaguar Animal Health, Inc.
San Francisco, CA

We hereby consent to the use in the Prospectus constituting a part of this Registration Statement of our report dated March 20, 2015, except for Note 15 which is as of April 17, 2015, relating to the financial statements of Jaguar Animal Health, Inc., which are contained in that Prospectus. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ BDO USA, LLP

San Francisco, CA

April 17, 2015