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As filed with the Securities and Exchange Commission on January 7, 2016.

Registration No. 333-

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

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)

201 Mission Street, Suite 2375
San Francisco, California 94105
(415) 371-8300
(Address, including zip code, and telephone number, including area code, of registrant's principal executive office)

Lisa A. Conte
Chief Executive Officer and President
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201 Mission Street, Suite 2375
San Francisco, California 94105
(415) 371-8300
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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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 ☒

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(2)
Common Stock, par value $0.0001 per share(2)	$12,650,000	$1,273.86

(1) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(o) of the Securities Act of 1933, as amended.

(2) Includes shares of common stock the underwriters have the option to purchase to cover over-allotments, if any.

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 JANUARY 7, 2016

Shares
Common Stock

This is a firm commitment public offering of shares of our common stock by Jaguar Animal Health, Inc. Our common stock is listed on The NASDAQ Capital Market under the symbol "JAGX." On January 6, 2016, the last reported sale price of our common stock was $2.45 per share.

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 involve a high degree of risk. See "Risk Factors" beginning on page 14 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) See "Underwriting" beginning on page 138 of this prospectus for a description of compensation payable to the underwriters.

We have granted a 45-day option to the underwriters to purchase up to 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 , 2016.

Aegis Capital Corp

, 2016

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Neither we nor the underwriters have 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: Neither we nor the underwriters have 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 before investing in our common stock. You should read this entire prospectus carefully, especially the section in this prospectus titled "Risk Factors" and our financial 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

We are an animal health company focused on developing and commercializing first-in-class gastrointestinal products for companion and production animals, and high value horses. Canalevia is our lead prescription drug product candidate for the treatment of various forms of diarrhea in dogs. We achieved statistically significant results in a canine proof-of-concept study completed in February 2015, suggesting 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. In December 2015 we initiated a pivotal trial to evaluate the safety and effectiveness of Canalevia for the treatment of acute diarrhea in dogs. Additionally, we are seeking a first to market introduction of Canalevia with a conditional approval for the indication of chemotherapy induced diarrhea, or CID. In June 2015 we completed a multi-site pilot safety study involving the anticipated commercial formulation of Canalevia for CID, and in August 2015 we completed submission of all required major technical sections for a conditional approval new animal drug application, or CNADA, for CID to the Food and Drug Administration, or FDA, for a phased review. 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 while at Napo Pharmaceuticals, Inc., or Napo. Neonorm is our lead non-prescription product to support gut health thereby normalizing fecal 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 in 2015 we launched Neonorm in the United States for foals under the brand name Neonorm Foal. We expect to launch additional formulations of Neonorm in the coming years. Through December 31, 2015, we have shipped approximately $611,000 of Neonorm Calf to distributors. Neonorm is a standardized 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 submitted nine active investigational new animal drug applications, or INADs, to 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 in animals. 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 diarrhea. We believe that Canalevia will be effective in treating acute diarrhea because it acts at the last physiological step, conserved across mammalian species, in the manifestation of acute diarrhea, regardless of cause, by normalizing ion and water flow in the intestinal lumen. We are first seeking a minor use, minor species, or MUMS, designation with the FDA for Canalevia for CID in dogs which will shorten the time frame to commercialization if we are granted MUMS designation. If we receive conditional approval pursuant to MUMS designation, we expect to commercialize Canalevia for CID in dogs in the second half of 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 acute diarrhea as a secondary indication. We plan to market Canalevia, if approved, through our focused direct sales force and to complement our relationships 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 that the incidence rate of scours and its corresponding financial impact represent a health and business opportunity and that Neonorm has the potential to effectively meet this need. A challenge clinical study was completed in May 2014 by researchers from Cornell University College of Veterinary Medicine, or Cornell, and published in 2015 in the official journal of the American Dairy Science Association, *Journal of Dairy Science*. The results of this 2013 study suggest that Neonorm Calf can significantly increase the fecal dry matter of neonatal calves with experimentally-induced enterotoxigenic *E. coli* diarrhea, and suggest a potential benefit of Neonorm Calf in supporting weight gain in calves. The results of our field study in Wisconsin completed in 2015 further support the benefits of Neonorm Calf in reducing water loss associated with diarrhea and enabling weight gain in preweaned dairy calves.

A further analysis of the Cornell study completed in October 2015 supports the benefit of Neonorm Calf on the optimization of the intestinal microbiome profile in preweaned dairy calves, a potential prebiotic benefit. The microbiome is a community of microorganisms that live normally in the gut and are vital to maintenance of gut health. We recently initiated a placebo-controlled study in conjunction with researchers from Cornell to evaluate the efficacy of the prophylactic use of a second-generation formulation of Neonorm Calf administered in liquid on naturally occurring diarrhea in preweaned dairy calves and investigate the possible prebiotic benefit of the product. This double-blinded, randomized study will involve 40 Holstein bull calves affected with naturally occurring diarrhea. The study will compare prophylactic use against a placebo (water), and either the placebo or the Neonorm will be administered twice daily. Data regarding fecal dry matter will be used to measure water loss due to secretory diarrhea. Body weight measurements will be performed daily to determine average daily weight gain during the 25-day study. Blood and fecal samples will also be collected, along with data related to bacterial genus prevalence.

This study will elucidate the mechanism by which the prophylactic use of the second-generation formulation of Neonorm Calf may support the gut health of preweaned calves herd-wide during the onset of naturally occurring diarrhea. Additionally, characterization of the fecal microbiome throughout the preweaning period will allow us to demonstrate that, under natural conditions, the product may positively alter the intestinal microbiome to the benefit of the host. We expect results from this study to be available in 2016.

We launched Neonorm for preweaned dairy calves in the United States under the brand name Neonorm Calf in 2014. Our commercialization activities are focused 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. In February 2015 we 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 Calf 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.

In December 2015 we announced positive results for an exploratory, investigator-initiated follow-up study which assessed the safety and performance of Neonorm Foal, without inclusion of a probiotic, in preweaned foals with watery diarrhea. In November 2015 we completed an initial proof-of-concept study (NEO101) of Neonorm Foal that involved 60 foals. The objective of this earlier, randomized, multi-site, blinded, placebo-controlled study was to evaluate the safety and performance of the product for use in foals suffering from secretory diarrhea, wherein animals received Neonorm Foal in combination with a third-party probiotic. The results of a meta-analysis between the two studies demonstrated a significantly higher percentage of foals with clinical response and resolution of diarrhea for Neonorm Foal, from either ARG102 or NEO101, compared with the placebo group in NEO101.

During the 72-hour administration period, 35% of foals receiving the placebo in NEO101 were identified as clinical responders, compared with 85% of foals treated with Neonorm Foal in ARG102. For the purposes of both studies, clinical responders were defined as foals that achieved a formed stool by the end of the reported period.

During the 72-hour administration period, resolution of diarrhea was observed in 41% of foals receiving a placebo in NEO101 compared with 85% of foals receiving Neonorm Foal in ARG102. For the purposes of both studies, resolution of diarrhea was defined as a foal that produced a formed stool at any point during the reported period.

In December 2015 we conducted a soft launch of Neonorm Foal at the American Association of Equine Practitioners Annual Convention in Las Vegas. The convention was attended by more than 7,394 veterinary professionals, students, exhibitors and other industry professionals. There was a positive interest in the product from the many attending equine veterinarians who visited our booth at this event, and we received approximately 130 requests for free samples of Neonorm Foal.

We expect the ongoing launch of Neonorm Calf and Neonorm Foal to drive awareness among veterinarians regarding the utility of our first-in-class anti-secretory *Croton lechleri* -derived products, including our prescription product, 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 license includes rights to Neonorm, Canalevia, and other distinct prescription drug product candidates in our pipeline along with the corresponding existing preclinical 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, Zoetis Inc., Vétoquinol S.A., Merial Inc., the animal health division of Sanofi S.A., Morris Animal Foundation, Virbac Animal Health and Merck Animal Health, as well as management experience at major veterinary hospital institutions and experience at the FDA's Center for Veterinary Medicine.

Product Pipeline

We are developing a pipeline of prescription drug product candidates and non-prescription (non-drug) 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	• Completed safety study with commercial formulation in June 2015 • Submitted all required major technical sections of a new animal drug application, or NADA, in August 2015	• Possible conditional approval in second half of 2016
	Dogs	Acute diarrhea	• Product development meeting with FDA in 2015	• Complete clinical development program fourth quarter of 2016
Species-specific formulations of crofelemer	Horses	Acute colitis	• Initiated pivotal trial to evaluate safety and effectiveness in December 2015 • Completed pilot safety study in December 2015	• Initiate NADA in 2016 • Product development meeting with FDA first half of 2016 • Possible MUMS designation in fourth quarter of 2016 • Commence clinical development program under CVM concurred protocols first half of 2016
	Horses	Colonic and gastric ulcers	• INAD opened in October 2015 • Initiated proof-of-concept safety and effectiveness study in November 2015 • Completed enrollment in proof-of-concept safety and effectiveness study in December 2015	• Proof-of-concept safety and effectiveness results in first quarter of 2016 • Product development meeting with FDA in first half of 2016 • Commence clinical development program under CVM concurred protocols second half of 2016
	Cats	Acute diarrhea	• INAD opened in 2014	• Safety and proof-of-concept results first half of 2016
Virend (topical)	Cats	Herpes virus	• INAD opened in 2014	• Safety and proof-of-concept results in 2016
Species-specific formulations of NP-500	Dogs	Obesity-related metabolic dysfunction	• INAD opened in 2014	
	Horses	Metabolic syndrome	• INAD opened in 2014	
	Cats	Type II diabetes	• INAD opened in 2014	

Non-Prescription Products

Products	Species	Use	Recent Developments	Anticipated Near-Term Milestones
Neonorm Calf	Dairy calves	Supports gut health and normalizing fecal formation in preweaned dairy calves with scours	• Initiated study in December, 2015 to investigate possible prophylactic and prebiotic benefits	• Launch second generation formulation for administration in liquid
			• South American distribution agreement signed in first quarter of 2015	• Commercial launch in South America
			• Approximately $611,000 of product shipped to distributors since commercial launch	
			• Analysis completed in October 2015 supports prebiotic effect	
			• Field study completed in September 2015 supports beneficial effect of on prewean weight gain	
Species-specific formulations of Neonorm	Horse foals	Supports gut health normalizing fecal formation	• Completed proof-of-concept study in November 2015	• Commercial launch in first quarter of 2016
			• Soft-launched product in December 2015	
	Other farm/production animals	Supports gut health normalizing fecal formation	• Conducted market research in 2015 which was initiated in New Zealand and China in 2014 for global market opportunities	• Initiate proof-of-concept studies and partnering discussions 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 Calf and Neonorm Foal are our lead non-prescription products to improve gut health and normalize stool formation for preweaned dairy calves with scours, and to promote normal fecal formation and reduce fluid loss in foals, respectively. 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 standardized botanical extract that is less refined than crofelemer and includes other 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 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 acute diarrhea in dogs as a secondary indication. 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 high value 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 product approval and therefore 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 including formulations of Neonorm for sheep and other farm animals. We are seeking protocol concurrences from the FDA where appropriate. For example, we are planning a trial to develop a formulation of crofelemer for acute diarrhea in cats, and in December 2015 we completed a pilot safety study to evaluate the safety of crofelemer in adult high value horses, the first step in a planned development program for acute colitis.

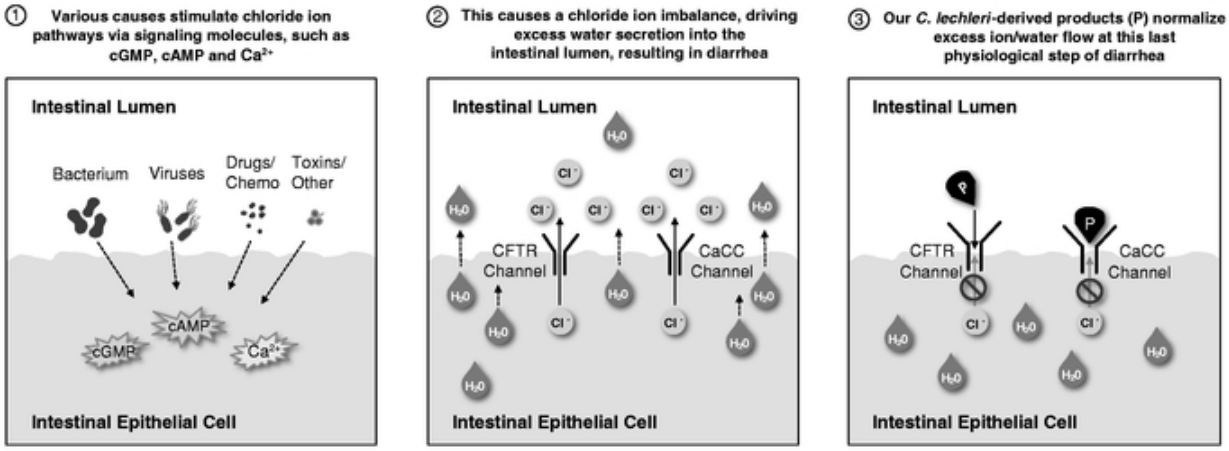
A protocol concurrence in animal drug development means that the FDA agrees that the design and analyses proposed in a protocol are acceptable to support regulatory approval of the product candidate with respect to effectiveness of the indication studied and will not change its view of these matters, unless public or animal health concerns arise that were not recognized at the time of concurrence or we change the protocol. We plan to seek concurrence on all major regulatory trials.

We have licensed intellectual property from Napo to develop prescription drug product candidates for diabetes and metabolic syndrome for dogs, cats and high value 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.

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 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, preweaned dairy calves, foals and dogs will be confirmed in multiple other species, including cats and adult horses. Accordingly, we believe we can bring to market multiple products for a range of species that are first-in-class and effective in preventing the debilitating and devastating ramifications of watery diarrhea in companion and production animals. The following

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



We have recently supplemented our anti-secretory product line by filing intellectual property for combinations with rifaximin, a non-absorbed antibiotic. Rifaximin is approved for human use for the treatment of traveler's diarrhea and for reduction of the risk of recurrence of hepatic encephalopathy. It is now approved for oral 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 causes 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 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.*** In addition to Canalevia for dogs and Neonorm for preweaned dairy calves, we are developing 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 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 for both the companion and production animal markets, as well as continue to partner with leading distributors to commercialize our products.

- ***Launch Canalevia and our other product candidates for companion animals, if approved, leveraging the commercial capabilities and brand awareness we are currently building.*** We believe the ongoing Neonorm launch will allow us to establish sales and marketing capabilities in advance of the planned launch of Canalevia for both CID (early 2016) and general watery diarrhea (2016) in dogs, to build corporate brand identity awareness, and to 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, 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. 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 gastrointestinal pipeline product candidates, both *Croton lechleri* and rifaximin-based, 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 been through Phase 2 human clinical testing. We have exclusive worldwide rights to a library of over 2,300 medicinal plants for all veterinary treatment uses 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." These 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 and other expenses, and may never become profitable. Our independent registered public accounting firm has expressed substantial doubt about our ability 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 product, Neonorm, and cannot be certain that necessary approvals will be received for Canalevia or that these products will be successfully commercialized, either by us or 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 our 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 any 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 expensive, time-consuming and uncertain, and any delay or discontinuance of our current or future pivotal trials, or dosage or formulation studies, would harm our business and prospects.
- Even if we obtain any required regulatory approvals for our current or future prescription drug product candidates, they may never achieve market acceptance or commercial success.
- We are dependent upon contract manufacturers for supplies of our current prescription drug product candidates and non-prescription products and 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 products, 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 animal health products. Effective as of December 31, 2013, we were a wholly-owned subsidiary of Napo, and until May 13, 2015, we were a majority-owned subsidiary of Napo. See "Certain Relationships and Related Person Transactions—Transactions with Napo" and "—Napo Arrangements" for information regarding our transactions with Napo.

Our executive offices are located at 201 Mission Street, Suite 2375, San Francisco, California 94105, and our telephone number is (415) 371-8300. Our website 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 reference 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 an emerging growth company, we are permitted and intend to rely on exemptions from specified disclosure requirements that are applicable to other public companies 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, with 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 parachute payments not previously approved.

We can take advantage of these provisions until December 31, 2020 (the fiscal year-end following the fifth anniversary of the closing of our initial public offering, which occurred on May 18, 2015) or such earlier time that we are no longer an emerging growth company. We would cease to be an 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 held 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 advantage of some, but not all, of the available exemptions. We have taken advantage of some reduced reporting burdens in this prospectus. Accordingly, the information 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	shares (or shares if the underwriters exercise their option to purchase additional shares in full)
Common stock to be outstanding after this offering	shares (or 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 additional shares of our common stock to cover over-allotments, if any.
Use of proceeds	The net proceeds from this offering after deducting estimated underwriting discounts and commissions and offering expenses payable by us will be approximately $ million (or $ million if the underwriters exercise in full their option to purchase additional shares of common stock from us), assuming an offering price per share of $, the last reported sale price of our common stock on The NASDAQ Capital Market on January , 2016. We intend to use the net proceeds from this offering for development work for Canalevia and our other prescription drug products, for commercial activities related to Neonorm, for formulation costs and establishing contract manufacturing capabilities, 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.
NASDAQ Capital Market symbol	"JAGX"

The number of shares of common stock to be outstanding after this offering is based on 8,124,923 shares of common stock outstanding as of December 31, 2015, and excludes as of such date:

- 143,000 shares of common stock issuable upon exercise of outstanding warrants issued as of December 31, 2015 at an exercise price of $8.75 per share;
- 207,664 shares of common stock issuable upon exercise of outstanding warrants as of December 31, 2015 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, 2015 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, 2015 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, 2015 with an exercise price of $5.60 per share;
- 919,506 shares issuable upon exercise of outstanding options as of December 31, 2015 with a weighted-average exercise price of $3.87 per share;

- 55,536 shares issuable upon vesting of outstanding restricted stock unit awards, or RSUs, as of December 31, 2015;
- up to 26,785 shares of common stock issuable upon conversion of outstanding convertible promissory notes in the aggregate principal amount of $150,000 issued as of December 31, 2015; and
- 106,833 shares of common stock reserved for future issuance under our 2014 Stock Incentive Plan as of December 31, 2015.

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

- no exercise of outstanding options or warrants, or issuance of shares upon the vesting of restricted stock units;
- a public offering price of $, which was the last reported sale price of our common stock on The NASDAQ Capital Market on January , 2016; and
- no exercise by the underwriters of their option to purchase additional shares of common stock.

Recent Developments

In May 2015, we completed the initial public offering of our common stock. In connection with our initial public offering, we issued 2,860,000 shares of our common stock at a price to the public of $7.00 per share. Our shares of common stock began trading on The NASDAQ Capital Market on May 13, 2015. As a result of the initial public offering, we received approximately $15.9 million in net proceeds, after deducting underwriting discounts and commissions of $1.2 million and offering expenses of $3.3 million.

In September 2015, we entered into a four-year manufacture and supply agreement, or the Supply Agreement, with a contract manufacturer in India for the manufacture and supply of active pharmaceutical ingredient, or API. For each calendar year, we and the manufacturer will agree to a minimum annual quantity that we will purchase. In connection with the Supply Agreement, we paid $49,090 in September 2015 as an advance payment for the API, which was included in prepaid expenses at September 30, 2015.

In October 2015, we entered into a formulation development and manufacturing contract with a manufacturer, whereby the manufacturer will provide enteric-coated tablets to us for use in animals. The total amount committed to be paid by us during 2015 and 2016 under this contract is estimated to be approximately $850,000.

In December 2015, we hired a new Chief Financial Officer.

In December 2015, we entered into an amendment to our technology transfer and commercial manufacturing agreement with our contract manufacturer in Italy delaying a €150,000 payment which was originally due on December 31, 2015. This payment is now due on March 31, 2016.

In December 2015, we met benchmarks which reduced our restricted cash balance by $1.5 million from $4.5 million to $3.0 million as required by Hercules Technology Growth Capital, Inc., or Hercules Technology, pursuant to the Loan and Security Agreement, dated August 18, 2015, between us, certain of our subsidiaries, the several banks and other financial institutions or entities from time to time party thereto as lenders and Hercules Technology.

In December 2015, we paid a license fee of $500,000 to Napo pursuant to the Amended and Restated License Agreement, dated August 6, 2014, as amended, between Napo and us.

SUMMARY FINANCIAL DATA

The following summary financial data should be read together with our financial statements and related notes, "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus. The summary statements of operations data for the period from June 6, 2013 (date of inception) to December 31, 2013 and the year ended December 31, 2014, and the nine months ended September 30, 2014 and 2015, and the balance sheet data as of September 30, 2015 have been derived from our audited financial statements and unaudited interim condensed financial statements included elsewhere in this prospectus. Historical results are not necessarily indicative of the results that may be expected in the future and results of interim periods are not necessarily indicative of the results for the entire year.

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014	Nine Months Ended September 30,	
			2014	2015
			(Unaudited)	
Statements of Operations Data:				
Revenue	$ —	$ —	$ —	$ 203,195
Operating expenses:				
Cost of revenue	—	—	—	87,889
Research and development expense	324,479	4,220,338	3,275,991	4,414,162
Selling and marketing expense	—	—	—	519,275
General and administrative expense	458,473	4,095,324	3,196,120	3,784,272
Total operating expenses	782,952	8,315,662	6,472,111	8,805,598
Loss from operations	(782,952)	(8,315,662)	(6,472,111)	(8,602,403)
Interest expense, net	(18,251)	(345,336)	(168,384)	(3,033,238)
Other income (expense), net	—	—	—	(23,471)
Change in fair value of warrants	—	51,423	—	(501,617)
Net loss and comprehensive loss	$ (801,203)	$ (8,609,575)	$ (6,640,495)	$ (12,160,729)
Accretion of redeemable convertible preferred stock	—	(646,673)	(465,841)	(346,374)
Net loss attributable to common stockholders	$ (801,203)	$ (9,256,248)	$ (7,106,336)	$ (12,507,103)
Net loss per common share, basic and diluted	$ (0.30)	$ (3.24)	$ (2.49)	$ (2.28)
Shares used in computing net loss per common share, basic and diluted	2,666,666	2,854,417	2,848,467	5,488,655

	As of September 30, 2015	
	Actual	As Adjusted
	(Unaudited)	
Balance Sheet Data:		
Cash and cash equivalents	$ 10,377,483	$
Working capital	7,286,823	
Total assets	16,641,322	
Long-term debt	4,457,994	
Accumulated deficit	(21,571,507)	
Total stockholders' equity	8,365,802	

The preceding table presents a summary of our unaudited balance sheet data as of September 30, 2015:

- on an actual basis;
- on an as adjusted basis to give effect to the receipt of the estimated net proceeds from the sale of shares of common stock in this offering at an assumed public offering price of $ per share, which was the last reported sale price of our common stock on The NASDAQ Capital Market on January , 2016 after deducting the underwriting discounts and commissions and estimated expenses payable by us. A $1.00 increase (decrease) in the assumed public offering price of $ per share would increase (decrease) each of cash and cash equivalents, working capital, total assets, and total stockholders' equity by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions. The as adjusted data is illustrative only and will be adjusted based on the actual public offering price and 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 nine months ended September 30, 2015 was $12,160,729. As of September 30, 2015, we had total stockholders' equity of $8,365,802. 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 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 independent registered public accounting firm has included an explanatory paragraph in its 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 and horses. Since inception 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 commenced sales of Neonorm for preweaned dairy calves in the United States under the brand name Neonorm Calf at the end of 2014. 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 that the net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operating plan through January 2017 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 the loan and security agreement (which provided for an initial loan commitment of $6.0 million), 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 Inc., Elanco Animal Health, Bayer Animal Health GmbH, Novartis Animal Health Inc. and Boehringer Ingelheim Animal Health, as well as specialty animal health medicines companies such as Zoetis Inc., Phibro Animal Health Corporation and, in Europe, Virbac S.A., Vétoquinol S.A., Ceva Animal Health S.A. and Dechra Pharmaceuticals PLC. 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 safety and 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 and in the target species;
- if they require additional studies or change their approval policies or regulations;
- if they do not approve of the formulation, labeling or the specifications of 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, we may not be successful in developing species-specific formulations for Neonorm, and Neonorm may be subject to the same regulatory regime as prescription drug products in jurisdictions outside the United States. Any delays in completing 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. 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 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 four-year manufacturing and supply agreement with Glenmark for the supply of the API in Canalevia. Glenmark is the current manufacturer of crofelemer, the active API in Canalevia, for the FDA-approved human anti-secretory product, and the manufacturer on file for the NADA to which we have a right of reference. We have contracted with a third-party manufacturer for formulation development and manufacturing, whereby the manufacturer will provide enteric-coated tablets to us for use in animals. We also may contract with additional third parties for the formulation and supply of finished products, which we will use in our planned studies and commercialization efforts.

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 December 31, 2015, we had 23 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 % 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. Further, Jaguar and Napo are engaged in preliminary exploratory discussions to review a potential merger and/or other ways to cooperate with their respective business endeavors; however, there is no assurance that any agreement will be reached to merge or further cooperate with their respective business endeavors.

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 except humans. 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 that cover enteric protected formulations of proanthocyanidin polymers isolated from *Croton spp*. and methods of treating watery diarrhea using the enteric protected formulations 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 and have currently pending three applications under the Patent Cooperation Treaty, or PCT, one U.S. non-provisional patent application and eight provisional patent applications in the veterinary field, of which 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, clinical development, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product may be subject to extensive and ongoing regulatory requirements. These requirements could include, but are not limited to, submissions of efficacy and safety and other post-marketing information and reports, establishment registration, and product listing, compliance with new rules promulgated under the FSMA, as well as continued compliance with cGMP, GLP and GCP for any studies that 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, are reportable events to the FDA and may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market, revised labeling, or voluntary or involuntary product recalls;
- additional clinical studies
- fines, warning letters or holds on target animal studies;
- refusal by the FDA, or other regulators to approve pending applications or supplements to approved applications filed by 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 issuance by the FDA of protocol concurrences for our pivotal studies does not guarantee ultimate approval of our NADA.

We intend to seek protocol concurrences from 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 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, 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, facility inspections, removal of our products from the market, recalls of certain lots or batches, or cause a delay in approval or clearance of future products.

Legislative or regulatory reforms with respect to animal health may make it more difficult and costly for 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's 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;
- additional clinical trials or testing;
- new requirements related to approval to enter the market;
- recall, replacement, or discontinuance of certain products; and
- additional record keeping or the development of certain regulatory required hazard identification plans.

Each of these would likely entail substantial time and cost and could harm 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 believe that our non-prescription products are not subject to regulation by regulatory agencies in the United States, but there is a risk that regulatory bodies may disagree with 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 animal prescription drug products however, in many instances, the Federal Trade Commission will exercise primary or concurrent jurisdiction with FDA on non-prescription products as to post marketing claims made regarding the product. On April 22, 1996, the FDA published a statement in the Federal Register, 61 FR 17706, that it believes that the Dietary Supplement and Health Education Act, or DSHEA, does not apply to animal health supplement products, such as 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, animal food or animal feed additive. The Federal Food Drug and Cosmetic Act defines food as "articles used for food or drink for man or other animals and articles used as components of any such article." Animal foods are not subject to pre-market approval and are designed to provide a nutritive purpose to the animals that receive them. Feed additives are defined as those articles that are added to an animal's feed or water as illustrated by the guidance documents. 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.

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 public offering price.

Prior to our initial public offering in May 2015, there was no public market for shares of our common stock. The listing of our common stock on The NASDAQ Capital Market does not assure that a meaningful, consistent and liquid trading market exists. Although our common stock is listed on The NASDAQ Capital Market, trading volume in our common stock has been limited and an active trading market for our shares my never develop or be sustained. If an active market for our common stock does not develop, you may be unable to sell your shares when you wish to sell them or at a price that you consider attractive or satisfactory. The lack of an active market may also adversely affect 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 public offering price per share of our common stock will be substantially higher than the net tangible book value per share of our common stock immediately after the offering. At the assumed public offering price of $ per share, which was the last sale price of our common stock on The NASDAQ Capital Market on January , 2016, purchasers of our common stock will incur immediate dilution of $ per share in the net tangible book value of their purchased shares. Conversely, the shares of common stock that our existing stockholders currently own will receive an increase in net tangible book value per share. 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.

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

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

As of December 31, 2015, we had outstanding options to purchase an aggregate of 919,506 shares of our common stock at a weighted average exercise price of $3.87 per share and warrants to purchase an aggregate of 748,872 shares of our common stock at a weighted-average exercise price of $5.37 per share. The exercise of such outstanding options and warrants will result in further dilution of your investment. In addition, you may experience additional dilution if we issue common stock in the future. As a result of this dilution, you may receive significantly less in net tangible book value than the full purchase price you paid for the shares in the event of liquidation.

Our failure to meet the continued listing requirements of The NASDAQ Capital Market could result in a delisting of our common stock.

If we fail to satisfy the continued listing requirements of The NASDAQ Capital Market, such as the minimum closing bid price requirement, NASDAQ may take steps to delist our common stock. Such a delisting would likely have a negative effect on the price of our common stock and would impair your ability to sell or purchase our common stock when you wish to do so. In the event of a delisting, we would take actions to restore our compliance with NASDAQ's listing requirements, but we can provide no assurance that any such action taken by us would allow our common stock to become listed again, stabilize the market price or improve the liquidity of our common stock, prevent our common stock from dropping below the NASDAQ minimum bid price requirement or prevent future non-compliance with NASDAQ's listing requirements. Further, if we were to be delisted from The NASDAQ Capital Market, our common stock would cease to be recognized as covered securities and we would be subject to regulation in each state in which we offer our securities.

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, 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 contain provisions that could delay or prevent changes in control or changes in our management without the consent of our board of directors. These provisions to include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of 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 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, 2015, our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates will beneficially own in the aggregate approximately % 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.

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

Our initial public offering had a significant, transformative effect on us. Prior to our initial public offering, our business operated as a privately-held company, and we were not required to comply with public reporting, corporate governance and financial accounting practices and policies required of a publicly-traded company. As a publicly-traded company, we 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. These rules and regulations have substantially increased our legal and financial compliance costs and diverted 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 have needed 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 requires 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 our initial public offering, which occurred on May 18, 2015), 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 shares of common stock in this offering will be approximately $ (or approximately $ million if the underwriters exercise their option to purchase additional shares from us in full), assuming a public offering price of $ per share, which was the last reported sale price of our common stock on The NASDAQ Capital Market on January , 2016, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

A $1.00 increase (decrease) in the assumed public offering price of $ per share would increase (decrease) the net proceeds from this offering by approximately $ 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 estimated underwriting discounts and commissions 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 $ million, assuming that the public offering price remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We do not expect that a change in the 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 $1.9 million for clinical studies and regulatory approval costs related to Canalevia for CID ($0.1 million) and general watery diarrhea ($1.8 million) in dogs;
- approximately $1.5 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 ($0.3 million), acute colitis in horses ($0.6 million), and gastric and colonic ulcers in horses and proof-of-concept studies ($0.6 million);
- approximately $2.0 million for activities inside and outside the United States 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 $0.5 million for studies and field trials relating to non-prescription formulations of Neonorm Calf and for all other animal species including horse foals and adult horses;
- approximately $0.4 million for costs associated with developing species-specific formulations of our products;
- approximately $0.4 million for establishing third-party manufacturing capability, including the technology transfer at Indena S.p.A. pursuant to our memorandums of understanding; and
- the remaining funds will be utilized for working capital and general corporate purposes.

These expected uses of the net proceeds from this offering represent 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.

PRICE RANGE OF OUR COMMON STOCK

Our shares of common stock have been listed and traded on The NASDAQ Capital Market under the symbol "JAGX" since May 13, 2015. Prior to that date, there was no public market for our common stock.

The following table sets forth, for the periods indicated, the high and low intra-day sale prices in dollars on The NASDAQ Capital Market for our common stock.

Quarter Ended	High	Low
June 30, 2015 (from May 13, 2015)	$7.06	$4.56
September 30, 2015	$5.48	$1.90
December 31, 2015	$4.70	$1.69

On January 6, 2016, the last reported sale price of our common stock on The NASDAQ Capital Market was $2.45 per share. As of January 7, 2016, there were approximately 14 stockholders of record of our common stock. These figures do not reflect the beneficial ownership or shares held in nominee name, nor do they include holders of any RSUs.

DIVIDEND POLICY

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 September 30, 2015, as follows:

- on an actual basis; and
- on an as adjusted basis to give further effect to the sale of shares of common stock in this offering at the public offering price of $ per share (the last reported sale price of our common stock on The NASDAQ Capital Market on January , 2016, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

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."

	Actual(1)
Cash and cash equivalents	$ 10,377,483
Restricted cash	4,500,000
Stockholders' equity (deficit):	
Preferred stock, par value $0.0001 per share; 10,000,000 shares authorized, no shares issued and outstanding, actual; no shares issued and outstanding as adjusted	—
Common stock, par value $0.0001 per share: 50,000,000 shares authorized, 8,119,923 shares issued and outstanding, actual; shares issued and outstanding, as adjusted	812
Additional paid-in capital	29,936,497
Accumulated deficit	(21,571,507)
Total stockholders' equity	8,365,802
Total capitalization	$ 8,365,802

(1) A $1.00 increase or decrease in the assumed public offering price of $ per share would increase or decrease total stockholders' equity and total capitalization on an as adjusted basis by approximately $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions.

The outstanding share information in the table above is based on 8,124,923 shares of common stock outstanding as of September 30, 2015, and excludes:

- 143,000 shares of common stock issuable upon exercise of outstanding warrants as of September 30, 2015 at an exercise price of $8.75 per share;
- 207,664 shares of common stock issuable upon exercise of outstanding warrants as of September 30, 2015 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 September 30, 2015 with an exercise price of $6.30 per share;
- 269,937 shares of our common stock issuable upon exercise of outstanding warrants as of September 30, 2015 with an exercise price of $5.60 per share;
- 111,605 shares of common stock issuable upon exercise of outstanding warrants issued after September 30, 2015 with an exercise price of $5.60 per share;

- 849,776 shares issuable upon exercise of outstanding options as of September 30, 2015 with a weighted-average exercise price of $3.87 per share;
- 55,536 shares issuable upon vesting of outstanding restricted stock unit awards, or RSUs, as of September 30, 2015;
- up to 26,785 shares of common stock issuable upon conversion of outstanding convertible promissory notes in the aggregate principal amount of $150,000 issued after September 30, 2015; and
- 185,833 shares of common stock reserved for future issuance under our 2014 Stock Incentive Plan as of September 30, 2015.

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 public offering price per share of our common stock and the as adjusted net tangible book value per share of our common stock immediately after this offering.

As of September 30, 2015, our historical net tangible book value was $8.4 million, or $1.03 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 September 30, 2015.

Our as adjusted net tangible book value as of September 30, 2015 would have been $ or $ per share of common stock, after giving effect to the sale of the shares of common stock in this offering at the assumed public offering price of $ per share, which was the last reported sale price of our common stock on The NASDAQ Capital Market on January , 2016, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. This amount represents an immediate increase in adjusted net tangible book value of $ per share to our existing stockholders, and an immediate dilution in adjusted net tangible book value of approximately $ per share to new investors purchasing shares of common stock in this offering.

Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of our common stock in this offering and the net tangible book value per share of our common stock immediately after this offering. The following table illustrates this dilution:

Assumed public offering price per share		$
Historical net tangible book value per share as of September 30, 2015	$ 1.03	
Increase in net tangible book value per share attributable to new investors		
As adjusted net tangible book value per share after this offering		
Dilution per share to new investors		$

If the underwriters exercise their option to purchase additional shares in full, the as adjusted net tangible book value will increase to $ per share, representing an immediate dilution of $ per share to new investors, assuming that the public offering price will be $ per share, which was the last reported sale price of our common stock on The NASDAQ Capital Market on January , 2016.

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

- 143,000 shares of common stock issuable upon exercise of outstanding warrants as of September 30, 2015 at an exercise price of $8.75 per share;
- 207,664 shares of common stock issuable upon exercise of outstanding warrants as of September 30, 2015 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 September 30, 2015 with an exercise price of $6.30 per share;
- 269,937 shares of our common stock issuable upon exercise of outstanding warrants as of September 30, 2015 with an exercise price of $5.60 per share;
- 111,605 shares of common stock issuable upon exercise of outstanding warrants issued as of September 30, 2015 with an exercise price of $5.60 per share;

- 849,766 shares issuable upon exercise of outstanding options as of September 30, 2015 with a weighted-average exercise price of $3.87 per share;
- 55,536 shares issuable upon vesting of outstanding restricted stock unit awards, or RSUs, as of September 30, 2015;
- up to 26,785 shares of common stock issuable upon conversion of outstanding convertible promissory notes in the aggregate principal amount of $150,000 issued as of September 30, 2015; and
- 185,833 shares of common stock reserved for future issuance under our 2014 Stock Incentive Plan as of September 30, 2015.

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 September 30, 2015, the as adjusted net tangible book value after this offering would be $ per share, and total dilution to new investors would be $ 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 % 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 , or approximately % 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." The summary statements of operations data for the period from June 6, 2013 (date of inception) to December 31, 2013 and the year ended December 31, 2014, and the nine months ended September 30, 2014 and 2015, and the balance sheet data as of September 30, 2015 have been derived from our audited financial statements and unaudited interim condensed financial statements included elsewhere in this prospectus. Historical results are not necessarily indicative of the results that may be expected in the future and results of interim periods are not necessarily indicative of the results for the entire year.

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014	Nine Months Ended September 30,	
			2014	2015
			(Unaudited)	
Statements of Operations Data:				
Revenue	$ —	$ —	$ —	$ 203,195
Operating expenses:				
Cost of revenue	—	—	—	87,889
Research and development expense	324,479	4,220,338	3,275,991	4,414,162
Selling and marketing expense	—	—	—	519,275
General and administrative expense	458,473	4,095,324	3,196,120	3,784,272
Total operating expenses	782,952	8,315,662	6,472,111	8,805,598
Loss from operations	(782,952)	(8,315,662)	(6,472,111)	(8,602,403)
Interest expense, net	(18,251)	(345,336)	(168,384)	(3,033,238)
Other income (expense), net	—	—	—	(23,471)
Change in fair value of warrants	—	51,423	—	(501,617)
Net loss and comprehensive loss	$ (801,203)	$ (8,609,575)	$ (6,640,495)	$ (12,160,729)
Accretion of redeemable convertible preferred stock	—	(646,673)	(465,841)	(346,374)
Net loss attributable to common stockholders	$ (801,203)	$ (9,256,248)	$ (7,106,336)	$ (12,507,103)
Net loss per common share, basic and diluted	$ (0.30)	$ (3.24)	$ (2.49)	$ (2.28)
Shares used in computing net loss per common share, basic and diluted	2,666,666	2,854,417	2,848,467	5,488,655

	September 30, 2015	
	Actual	As Adjusted
	(unaudited)	
Balance Sheet Data:		
Cash and cash equivalents	$ 10,377,483	$
Working capital	7,286,823	
Total assets	16,641,322	
Long-term debt	4,457,994	
Accumulated deficit	21,571,507	
Total stockholders' (deficit) equity	8,365,802	

The preceding table presents a summary of our unaudited balance sheet data as of September 30, 2015:

- on an actual basis;
- on an as adjusted basis to give effect to the receipt of the estimated net proceeds from the sale of shares of common stock in this offering at the assumed public offering price of $ per share, which was the last reported sales price of our common stock on the NASDAQ Capital Market on January , 2016, and after deducting the underwriting discounts and commissions and estimated expenses payable by us.

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, and high value horses. 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 completed submission of all required major technical sections for the conditional approval application for Canalevia for chemotherapy-induced diarrhea, or CID, in dogs, to the FDA for phased review. 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 fecal 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 $611,000 of Neonorm Calf to distributors through December 31, 2015. 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 May 2015, we completed the initial public offering of our common stock. In connection with our initial public offering, we issued 2,860,000 shares of our common stock at a price to the public of $7.00 per share. Our shares of common stock began trading on The NASDAQ Capital Market on May 13, 2015. As a result of the initial public offering, we received approximately $15.9 million in net proceeds, after deducting underwriting discounts and commissions of $1.2 million and offering expenses of $3.3 million.

In September 2015, we entered into a four year manufacture and supply agreement, or Supply Agreement, with a contract manufacturer in India for the manufacture and supply of active pharmaceutical ingredient, or API. For each calendar year, we and the manufacturer will agree to a minimum annual quantity that we will purchase. In connection with the Supply Agreement, we paid $98,180 in 2015 as an advance payment for the API, which is included in prepaid expenses at December 31, 2015.

In October 2015, we entered into a formulation development and manufacturing contract with a manufacturer, whereby the manufacturer will provide enteric-coated tablets to us for use in animals. The total amount committed to be paid by the Company during 2015 and 2016 under this contract is estimated to be approximately $850,000.

In December 2015, we hired a new Chief Financial Officer and entered into an employment agreement.

In December 2015, we entered into an amendment to our technology transfer and commercial manufacturing agreement with our contract manufacturer in Italy delaying a €150,000 payment which was originally due on December 31, 2015. This payment is now due on March 31, 2016.

In December 2015, we met benchmarks which reduced our restricted cash balance by $1.5 million from $4.5 million to $3.0 million as required by Hercules Technology Growth Capital, Inc., or Hercules Technology, pursuant to the Loan and Security Agreement dated August 18, 2015, between us, certain of our subsidiaries, the several banks and other financial institutions or entities from time to time party thereto as lenders and Hercules Technology.

In December 2015, we paid a license fee of $500,000 to Napo Pharmaceuticals pursuant to the Amended and Restated License Agreement, dated August 6, 2014 as amended, between Napo and us.

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. We were previously a majority-owned subsidiary of Napo. However, following the closing of our May 2015 initial public offering, we are no longer majority-owned by Napo.

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 $9.3 million and $12.5 million for the nine months ended September 30, 2015. As of September 30, 2015, we had a total stockholders' equity of $8.4 million and cash and cash equivalents of $10.4 million. 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. As a result, we expect to experience increased expenditures for 2016.

Revenue

We sell our primary commercial product Neonorm to distributors under agreements that may provide distributor price adjustments and rights of return under certain circumstances. Until we have sufficient sales history and pipeline visibility, we will defer revenue and costs of distributor sales until products are sold by the distributor to the distributor's customers. Revenue recognition depends on notification either directly from the distributor that product has been sold to the distributor's customer, when we have access to the data. We maintain system controls to verify that the reported distributor and third party data is accurate. Deferred revenue on shipments to distributors will reflect the

estimated effects of distributor price adjustments, if any, and the estimated amount of gross margin expected to be realized when the distributor sells through product purchased from the Company. Accounts receivable from distributors will be recognized and included in deferred revenue when we ship product to the distributor. We relieve Inventory and recognize revenue typically upon shipment by the distributor to their customer. While we did not have revenue in the nine months ended September 30, 2014, we did recognize $203,195 in revenue for the nine months ended September 30, 2015.

Cost of Revenue

Cost of revenue expenses consist of costs to manufacture and package and distribute Neonorm that distributors have sold through to their customers.

Research and Development Expense

Research and development expenses consist primarily of clinical and contract manufacturing expense, personnel and related benefit expense, stock-based compensation expense, employee travel expense, reforestation expenses and expenses attributable to services received from Napo under the Service Agreement. Clinical and contract manufacturing expense consists primarily of costs to conduct stability, safety and efficacy studies, and manufacturing startup expenses at an outsourced API provider in Italy.

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.

Sales and Marketing Expense

Sales and marketing expenses consist of personnel and related benefit expense, direct sales and marketing expense, employee travel expense, and management consulting expense. We currently incur sales and marketing expenses to promote Neonorm sales.

We expect sales and marketing expense to increase significantly as we develop and commercialize new products and grow our existing Neonorm market. We will need to add sales and marketing headcount to promote the sales of existing and new products.

General and Administrative Expense

General and administrative expenses consist of personnel and related benefit expense, stock-based compensation expense, employee travel expense, legal and accounting fees, and management consulting expense.

We expect general and administrative expense to increase in order to enable us to effectively manage the overall growth of the business. This will include adding headcount, enhancing information systems and potentially expanding corporate facilities.

Interest Expense

Interest expense consists primarily of interest on convertible promissory notes, the standby bridge financing commitment and the loan and security agreement. 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

Nine Months Ended September 30, 2015 Compared to Nine Months Ended September 30, 2014

The following table summarizes the results of our operations for the nine months ended September 30, 2014 and 2015:

	Nine Months Ended September 30,	
	2014	2015
	(unaudited, in thousands)	
Revenue:	$ —	$ 203
Operating expenses:		
Cost of revenue	—	88
Research and development expense	3,276	4,414
Sales and marketing expense	—	520
General and administrative expense	3,196	3,784
Total operating expenses	6,472	8,806
Loss from operations	(6,472)	(8,603)
Interest expense, net	(168)	(3,033)
Change in fair value of warrants	—	(502)
Other income	—	(23)
Net loss and comprehensive loss	$ (6,640)	$ (12,161)

Revenue and Cost of Revenue

Revenue and related cost of revenue for the nine months ended September 30, 2015 is for sales of Neonorm to our distributors. We defer revenue and cost of revenue until products are sold by the distributor to the distributor's end customers and recognition will depend on notification from the distributor that product has been sold to the distributor's end customer. Although we did sell Neonorm to distributors in the nine months ended September 30, 2014, there was no distributor sell-through and consequently we did not recognize any revenue.

Research and Development Expense

The following table presents the components of research and development expense for the nine months ended September 30, 2014 and 2015:

	Nine Months Ended September 30,	
	2014	2015
	(unaudited, in thousands)	
Personnel and related benefits	$ 731	$ 1,295
Materials expense and tree planting	1,385	116
Travel, other expenses	294	241
Clinical and contract manufacturing	572	2,109
Stock-based compensation	37	429
Other	257	224
Total	$ 3,276	$ 4,414

We plan to increase our research and development expense as we continue developing our drug candidates.

Research and development expense for the nine months ended September 30, 2015 includes expenses associated with clinical studies and manufacturing related activities and personnel and related benefits.

Research and development expense for the nine months ended September 30, 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.

Sales and Marketing Expense

Sales and marketing expense for the nine months ended September 30, 2014 and 2015 consisted of personnel costs, direct marketing, travel and consulting expenses.

General and Administrative Expense

The following table presents the components of general and administrative expense for the nine months ended September 30, 2014 and 2015:

	Nine Months Ended September 30,	
	2014	2015
	(unaudited, in thousands)	
Personnel and related benefits	$ 1,226	$ 1,453
Accounting fees	190	317
Third-party consulting fees and Napo service fees	378	108
Legal fees	365	437
Travel	446	311
Stock-based compensation	69	354
Other	522	804
Total	$ 3,196	$ 3,784

We expect to incur additional general and administrative expense as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the SEC, additional insurance expenses, investor relations activities and other administrative and professional services.

During the nine months ended September 30, 2015, general and administrative expense primarily consists of salaries and related benefits, accounting, legal, and travel. Legal fees were related to general corporate activities. Other expenses included costs related to marketing studies and business development consultants.

During the nine months ended September 30, 2014 general and administrative expense primarily consists of salaries and related benefits for employees, third-party consulting fees, legal 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.

Year Ended December 31 2014 Compared to Period from June 6, 2013 (date of inception) through December 31, 2013

The following table summarizes the results of our operations for the period from June 6, 2013 (date of inception) through December 31, 2013 and for the year ended December 31, 2014:

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
	(in thousands)	
Operating expenses:		
General and administrative expense	$ 458	$ 4,095
Research and development expense	324	4,220
Total operating expenses	782	8,315
Loss from operations	(782)	(8,315)
Interest (expense), net	(19)	(345)
Change in fair value of warrants	—	51
Net loss and comprehensive loss	$ (801)	$ (8,609)

General and Administrative Expense

The following table presents the components of general and administrative expense for the period from June 6, 2013 (date of inception) through December 31, 2013 and for the year ended December 31, 2014:

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
	(in thousands)	
Personnel and related benefits	$ —	$ 1,566
Accounting fees	—	190
Third-party consulting fees and Napo service fees	391	661
Legal fees	5	415
Travel, other expenses	—	638
Stock-based compensation	—	93
Other	62	532
Total	$ 458	$ 4,095

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 period from June 6, 2013 (date of inception) through December 31, 2013 and for the year ended December 31, 2014:

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
	(in thousands)	
Personnel and related benefits	$ —	$ 1,118
Third-party consulting and Napo service fees	136	175
Materials expense	—	1,400
Studies, formulation and assay costs	159	515
Travel, other expenses	—	344
Supply costs and contract manufacturing	—	460
Stock-based compensation	—	71
Other	29	137
Total	$ 324	$ 4,220

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 pre-weaned 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

Sources of Liquidity

We have not generated significant revenue and have incurred net losses since our inception. We had net losses of approximately $800,000 for the period from inception to December 31, 2013, $8.6 million for the year ended December 31, 2014 and $12.2 million for the nine months ended September 30, 2015. Our accumulated deficit was $21.6 million as of September 30, 2015. We expect to continue to incur additional losses through the end of fiscal year 2015 and in future years due to expected significant expenses for toxicology, safety and efficacy clinical trials of our products and product candidates, for establishing contract manufacturing capabilities, and for the commercialization of one or more of our product candidates, if approved.

We had cash and cash equivalents of $10.4 million as of September 30, 2015 compared to $845,192 as of December 31, 2014. We do not believe our existing cash and cash equivalents will be sufficient to

meet our anticipated cash requirements for the next 12 months. Our independent registered public accounting firm has included an explanatory paragraph in its 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.

To date, we have funded our operations primarily through the issuance of equity securities, short-term convertible promissory notes, and long-term debt, in addition to sales of Neonorm, our commercial product:

- In 2013, we received $400 from the issuance of 2,666,666 shares of common stock to our parent Napo Pharmaceuticals, Inc. We also received $519,000 of net cash from the issuance of convertible promissory notes in an aggregate principal amount of $525,000. These notes were all converted to common stock in 2014.

- In 2014, we received $6.7 million in proceeds from the issuance of convertible preferred stock. Effective as of the closing of our initial public offering, the 3,015,902 shares of outstanding convertible preferred stock were automatically converted into 2,010,596 shares of common stock. Following our initial public offering, there were no shares of preferred stock outstanding.

- In 2014, we received $1.1 million from the issuance of convertible promissory notes in an aggregate principal amount of $1.1 million. These notes were converted to common stock upon the effectiveness of the initial public offering in May of 2015. In August 2014, we entered into a standby line of credit with an individual, who is an accredited investor, for up to $1.0 million. To date, we had not made any drawdowns under this facility. Also, in October of 2014, as amended and restated in December 2014, we entered into a $1.0 million standby bridge loan which was repaid in 2015.

- In 2015, we received $1.25 million in exchange for $1.25 million of convertible promissory notes, of which $1.0 million was converted to common stock in 2015, and $100,000 was repaid in 2015. The remaining $150,000 remains outstanding.

- In May 2015, we received net proceeds of $15.9 million upon the closing of our initial public offering, gross proceeds of $20.0 million (2,860,000 shares at $7.00 per share) net of $1.2 million of underwriting discounts and commissions and $3.3 million of offering expenses. These shares began trading on The NASDAQ Capital Market on May 13, 2015.

- In 2015, we received net proceeds of $5.9 million from the issuance of long-term debt. We entered into a loan and security agreement with a lender for up to $8.0 million, which provided for an initial loan commitment of $6.0 million. Under the loan agreement we are required to maintain $4.5 million of the proceeds in cash, which amount may be reduced or eliminated on the achievement of certain milestones. An additional $2.0 million is available contingent on the achievement of certain further milestones. The agreement has a term of three years, with interest only payments through February 29, 2016. Thereafter, principal and interest payments will be made with an interest rate of 9.9%. Additionally, there will be a balloon interest payment of $560,000 on August 1, 2018. This amount is being recognized over the term of the loan agreement and the effective interest rate, considering the balloon payment, is 15.0%. Our proceeds are net of a $134,433 debt discount under the terms of such agreement.

- In 2014 and 2015, we received $24,000 and $531,000, respectively, in cash from sales of Neonorm to distributors.

- In 2015, we received approximately $13,000 in proceeds from the exercise of stock options.

We expect our expenditures will continue to increase following the closing of this offering once we have additional capital on hand in order to continue our efforts to develop animal health products, expand our commercially available Neonorm product 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 a memorandum of understanding relating to the establishment of our commercial API manufacturing arrangement in Italy. As of December 2015, we have paid €1.8 million of the €2.1 million and we will remit the remaining €250,000 in March of 2016.

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 January 2017 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.

Cash Flows for Nine Months Ended September 30, 2015 Compared to Nine Months Ended September 30 2014

The following table shows a summary of cash flows for the nine months ended September 30, 2014 and 2015:

	Nine Months Ended September 30,	
	2014	2015
	(unaudited, in thousands)	
Cash used in operating activities	$ (3,619)	$ (10,386)
Cash used in investing activities	(55)	(4,503)
Cash provided by financing activities	5,154	24,421

Cash Used in Operating Activities

During the nine months ended September 30, 2015 cash used in operating activities was the result of our net loss of $12.2 million, offset by non-cash accretion of debt discounts of $2.5 million, non-cash revaluation of warrant liability of $502,000 and stock-based compensation of $828,000, and amortization of deferred finance charges of $100,000, $35,000 loss on the sale of property and equipment, net of changes in operating assets and liabilities of $2.2 million.

During the nine months ended September 30, 2014, cash used in operating activities was the result of our net loss of $6.6 million, offset by and non-cash expense of the write-off of certain materials received from Napo of $1.1 million, warrants issued in connection with transfer agreement and line of credit of $85,000, and stock-based compensation of $106,000, offset by changes in operating assets and liabilities of $1.6 million.

Cash Used in Investing Activities

During the nine months ended September 30, 2015 cash used in investing activities primarily consisted of $4.5 million in restricted cash that resulted from our issuance of long-term debt.

Cash Provided by Financing Activities

During the nine months ended September 30, 2015, cash provided by financing activities primarily consisted of the gross proceeds from the issuance of $5.9 million in long-term debt, net of discounts, and $1.3 million in convertible promissory notes, offset by $1.1 million in repayments thereof. Additionally, $15.9 million in cash was provided related to our initial public offering, net of commissions and certain deferred offering costs.

During the nine months ended September 30, 2014, cash provided by financing activities consisted of net proceeds of $6.7 million from the issuance of Series A preferred stock and $450,000 for the issuance of convertible notes payable, offset by $2.0 million of offering costs.

Cash Flows for Year Ended December 31, 2014 Compared to Period from June 6, 2013 (date of inception) through December 31, 2013

The following table shows a summary of cash flows for the period from June 6, 2013 (date of inception) through December 31, 2013 and for the year ended December 31, 2014:

	Period from June 6, 2013 (inception) through December 31, 2013	Year Ended December 31, 2014
Cash used in operating activities	$ (335)	$ (5,463)
Cash used in investing activities	—	(55)
Cash provided by financing activities	520,206	6,178

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 $6.6 million 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 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. 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. There were no drawdowns under the facility as of March 31, 2015 when the line of credit expired.

On October 30, 2014, we entered into a standby bridge financing agreement, or the Bridge, with two lenders, which was amended and restated on December 3, 2014. The Bridge provided a loan commitment in the aggregate principal amount of $1,000,000. Proceeds to us were net of a $100,000 debt discount under the terms of the Bridge. This debt discount was recorded as interest expense using the effective interest method, over the six month term of the Bridge. The Bridge became payable upon our initial public offering. The Bridge was paid in May 2015, including interest thereon in an amount of $321,600. In connection with the Bridge, the lenders were granted warrants to purchase that number of shares of our common stock determined by dividing $1,000,000 by the exercise price of 80% of our initial public offering price, amended to $5.60 in March 2015. The fair value of the warrants, $505,348, was originally recorded as a debt discount and liability at December 3, 2014. The warrants were originally valued using the Black-Scholes model with the following assumptions: stock price of $5.01, exercise price of $5.23, term of five years, volatility of 63%, dividend yield of 0%, and risk-free interest rate of 1.61%. Based on the circumstances, the value derived using the Black-Scholes model approximated that which would be obtained using a lattice model. The debt discount was recorded as interest expense over the six month term of the Bridge. Of the aggregate debt discount of $605,348 (warrants and original $100,000 discount), $521,291 was recorded as interest expense during the nine months ended September 30, 2015. 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 nine months ended September 30, 2015, the remaining $86,667 of these deferred financing charges was recorded as interest expense.

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. Upon consummation of our initial public offering, the noteholders converted the notes into 116,070 shares of common stock at a conversion price equal to 80% of the initial public offering price, amended to $5.60 in March 2015. 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). The exercise price is $5.60 per share (80% of the initial public offering price).

In February 2015, we 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. Principal and interest of $103,912 was paid in May 2015 for $100,000 of these notes.

In March 2015, we entered into a non-binding letter of intent with Dechra Pharmaceuticals PLC, or Dechra. In connection therewith, Dechra paid us $1.0 million. At March 31, 2015, we recorded this amount as a loan advance on the balance sheet. In April 2015, Dechra purchased $1.0 million of convertible promissory notes from us, the terms of which provided that such notes were to be converted into shares of our common stock upon the closing of an initial public offering at a conversion price of $5.60 per share. In connection with the purchase of the notes, we issued Dechra a warrant to purchase 89,285 shares at $5.60 per share, which expires December 31, 2017. The notes accrued simple interest of 12% per annum and, upon consummation of our initial public offering in May 2015, converted into 178,571 shares of our common stock. We analyzed the beneficial nature of the conversion terms and determined that a beneficial conversion feature, or BCF, existed because the effective conversion price was less than the fair value at the time of the issuance. We calculated the value of the BCF using the intrinsic method. A BCF of for the full face value was recorded as a discount to the notes payable and to additional paid-in capital. For the nine months ended June 30, 2015, we amortized the entire BCF of $1.0 million which has also been recorded as interest expense.

In August 2015, we entered into a loan and security agreement with a lender for up to $8.0 million, which provided for an initial loan commitment of $6.0 million. The loan agreement requires us to maintain $4.5 million of the proceeds in cash, which amount may be reduced or eliminated on the achievement of certain milestones. An additional $2.0 million is available contingent on the achievement of certain further milestones. The agreement has a term of three years, with interest only payments through February 29, 2016. Thereafter, principal and interest payments will be made with an interest rate of 9.9%. Additionally, there will be a balloon interest payment of $560,000 on August 1, 2018. This amount is being recognized over the term of the loan agreement and the effective interest rate, considering the balloon payment, is 15.0%. We received proceeds of $5.9 million, $6.0 million net of a $134,433 debt discount under the terms of the loan agreement. This debt discount is being recorded as interest expense, using the interest method, over the term of the loan agreement. Under the agreement, we are entitled to prepay principal and accrued interest upon five days prior notice to the lender. In the event of prepayment, we are obligated to pay a prepayment charge. If such prepayment is made during any of the first twelve months of the loan agreement, the prepayment charge will be (a) during such time as we are required to maintain a minimum cash balance, 2% of the minimum cash balance amount plus 3% of the difference between the amount being prepaid and the minimum cash balance, and (b) after such time as we are no longer required to maintain a minimum cash balance, 3% of the amount being prepaid. If such prepayment is made during any time after the first twelve months of the loan agreement, the prepayment charge will be 1% of the amount being prepaid.

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.

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 may be placed in interest bearing accounts. As a result, our primary exposure to market risk for our cash may 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—Our common stock is 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. Prior to our IPO, 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
- the likelihood of achieving a liquidity event, such as this offering or a merger or acquisition of our company given prevailing market conditions.

The fair value per share of our common stock for purposes of determining stock-based compensation is now 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 $9.1 million, 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 condition 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 awarded. 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 ASU2014-19 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, 2017 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 and horses. Canalevia is our lead prescription drug product candidate for the treatment of various forms of diarrhea in dogs. We achieved statistically significant results in a canine proof-of-concept study completed in February 2015, suggesting 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. In December 2015 we initiated a pivotal trial to evaluate the safety and effectiveness of Canalevia for the treatment of acute diarrhea in dogs. Additionally, we are seeking a first to market introduction of Canalevia with a conditional approval for the indication of CID. In June 2015 we completed a multi-site pilot safety study involving the anticipated commercial formulation of Canalevia for CID, and in August 2015 we completed submission of all required major technical sections for a conditional approval new drug application, or CNADA, for CID to the FDA for a phased review. 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, while at Napo. Neonorm is our lead non-prescription product to support gut health thereby normalizing fecal 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 in 2015 we launched Neonorm in the United States for foals under the brand name Neonorm Foal. We expect to launch additional formulations of Neonorm in the next years. We have shipped approximately $611,000 of Neonorm Calf to distributors. Neonorm is a standardized 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 submitted nine active investigational new animal drug applications, or INADs, to 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 in animals. 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 diarrhea. We believe that Canalevia will be effective in treating acute diarrhea because it acts at the last physiological step, conserved across mammalian species, in the manifestation of acute diarrhea, regardless of cause, by normalizing ion and water flow in the intestinal lumen. We are first seeking MUMS, designation with the FDA for Canalevia for CID in dogs which all shorten the time frame to commercialization if we are granted MUMS designation. If we receive conditional approval pursuant to MUMS designation, we expect to commercialize Canalevia for CID in dogs in the second half of 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 acute diarrhea as a secondary indication. We plan to market Canalevia, if approved, through our focused direct sales force and to complement our relationships with distribution partners.

According to the Dairy 2007 study conducted by the 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 that the incidence rate of scours and its corresponding financial impact represent a health and business opportunity and that Neonorm has the potential to

effectively meet this need. A challenge clinical study was completed in May 2014 by researchers from Cornell, and published in 2015 in the official journal of the American Dairy Science Association, *Journal of Dairy Science*. The results of this 2013 study suggest that Neonorm Calf can significantly increase the fecal dry matter of neonatal calves with experimentally-induced enterotoxigenic *E. coli* diarrhea, and suggest a potential benefit of Neonorm Calf in supporting weight gain in calves. The results of our field study in Wisconsin completed in 2015 further support the benefits of Neonorm Calf in reducing water loss associated with diarrhea and enabling weight gain in preweaned dairy calves.

A further analysis of the Cornell study completed in October 2015 supports a benefit of Neonorm Calf on the optimization of the intestinal microbiome profile in preweaned dairy calves, a potential prebiotic benefit. The microbiome is a community of microorganisms that live normally in the gut and are vital to maintenance of gut health. We recently initiated a placebo-controlled study in conjunction with researchers from Cornell to evaluate the efficacy of the prophylactic use of a second-generation formulation of Neonorm Calf administered in liquid on naturally occurring diarrhea in preweaned dairy calves and investigate the possible prebiotic benefit of the product. This double-blinded, randomized study will involve 40 Holstein bull calves affected with naturally occurring diarrhea. The study will compare prophylactic use against a placebo (water), and either the placebo or the Neonorm administration will be performed twice daily. Data regarding fecal dry matter will be used to measure water loss due to secretory diarrhea. Body weight measurements will be performed daily to determine average daily weight gain during the 25-day study. Blood and fecal samples will also be collected, along with data related to bacterial genus prevalence.

This study will generate significant amounts of data to enlighten the mechanism by which the prophylactic use of the second-generation formulation of Neonorm Calf may support the gut health of preweaned calves herd-wide during naturally occurring diarrhea. Additionally, characterization of the fecal microbiome throughout the preweaning period will allow us to demonstrate that, under natural conditions, the product may positively alter the intestinal microbiome to the benefit of the host. We expect results from this study to be available in 2016.

We launched Neonorm for preweaned dairy calves in the United States under the brand name Neonorm Calf in 2014. Our commercialization activities are focused 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. In February 2015 we 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 Calf 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.

In November 2015 we completed an initial proof-of-concept study (NEO101) of Neonorm Foal that involved 60 foals. The objective of this earlier, randomized, multi-site, blinded, placebo-controlled study was to evaluate the safety and performance of the product for treatment of foals suffering from secretory diarrhea, and the treated animals received Neonorm Foal in combination with a third-party probiotic. The results of a meta-analysis between the two studies demonstrated a significantly higher percentage of foals with clinical response and resolution of diarrhea for Neonorm Foal, from either ARG102 or NEO101, compared with the placebo group in NEO101.

During the 72-hour administration period, 35% of foals receiving the placebo in NEO101 were identified as clinical responders, compared with 85% of foals treated with Neonorm Foal in ARG102. For the purposes of both studies, clinical responders were defined as foals that achieved a formed stool by the end of the reported period.

During the 72-hour administration period, resolution of diarrhea was observed in 41% of placebo-treated foals in NEO101 compared with 85% of foals receiving Neonorm Foal in ARG102. For the purposes of both studies, resolution of diarrhea was defined as a foal that produced a formed stool at any point during the reported period.

In December 2015 we conducted a soft launch of Neonorm Foal at the American Association of Equine Practitioners Annual Convention in Las Vegas. The convention was attended by more than 7,394 veterinary professionals, students, exhibitors and other industry professionals. There was a positive interest in the product from the many attending equine veterinarians who visited the Jaguar booth at this event, and we received approximately 130 requests for free samples of Neonorm Foal.

In December 2015 we announced positive results for an exploratory, investigator-initiated follow-up study which assessed the safety and performance of Neonorm Foal, without inclusion of a probiotic, in preweaned foals with watery diarrhea.

We expect the ongoing launch of Neonorm Calf promoting normal fecal formation and reducing fluid loss in preweaned calves and Neonorm Foal to drive awareness among veterinarians regarding the utility of our first-in-class anti-secretory *Croton lechleri*—derived products, including our prescription product, 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 Neonorm Canalevia, and other distinct prescription drug product candidates in our pipeline along with the corresponding existing preclinical 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, Zoetis Inc., Vétoquinol S.A., Merial Inc., the animal health division of Sanofi S.A., Morris Animal Foundation, Virbac Animal Health, and Merck Animal Health, as well as management experience at major veterinary hospital institutions and experience at the FDA's Center for Veterinary Medicine.

Product Pipeline

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

Prescription Drug Product Candidates

Product Candidates	Species	Indication	Recent Developments	Anticipated Near-Term Milestones
Canalevia	Dogs	CID	• Completed safety study with commercial formulation in June 2015	• Possible conditional approval in second half of 2016
	Dogs	Acute diarrhea	• Submitted all required major technical sections of NADA in August 2015 • Product development meeting with FDA in 2015 • Initiated pivotal trial to evaluate safety and effectiveness in December 2015	• Complete clinical development program fourth quarter of 2016 • Initiate NADA in 2016
Species-specific formulations of crofelemer	Horses	Acute colitis	• Completed pilot safety study in December 2015	• Product development meeting with FDA first half of 2016 • Possible MUMS designation in fourth quarter of 2016 • Commence clinical development program under CVM concurred protocols first half of 2016
	Horses	Colonic and gastric ulcers	• INAD opened in October 2015 • Initiated proof-of-concept safety and effectiveness study in November 2015 • Completed enrollment in proof-of-concept safety and effectiveness study in December 2015	• Proof-of-concept safety and effectiveness results in first quarter of 2016 • Product development meeting with FDA in first half of 2016 • Commence clinical development program under CVM concurred protocols second half of 2016
	Cats	Acute diarrhea	• INAD opened in 2014	• Safety and proof-of-concept results first half of 2016
Virend (topical)	Cats	Herpes virus	• INAD opened in 2014	• Safety and proof-of-concept results in 2016
Species-specific formulations of NP-500	Dogs	Obesity-related metabolic dysfunction	• INAD opened in 2014	
	Horses	Metabolic syndrome	• INAD opened in 2014	
	Cats	Type II diabetes	• INAD opened in 2014	

Non-Subscription Products

Products	Species	Use	Recent Developments	Anticipated Near-Term Milestones
Neonorm Calf	Dairy calves	Supports gut health and normalizing fecal formation in preweaned dairy calves with scours	• Initiated study in December, 2015 to investigate possible prophylactic and prebiotic benefits	• Launch second generation formulation for administration in liquid
			• South American distribution agreement signed in first quarter of 2015	• Commercial launch in South America
			• Approximately $611,000 of product shipped to distributors since commercial launch	
			• Analysis completed in October 2015 supports prebiotic effect	
			• Field study completed in September 2015 supports beneficial effect of on prewean weight gain	
Species-specific formulations of Neonorm	Horse foals	Supports gut health normalizing fecal formation	• Completed proof-of-concept study in November 2015	• Commercial launch in first quarter of 2016
			• Soft-launched product in December 2015	
	Other farm/production animals	Supports gut health normalizing fecal formation	• Conducted market research in 2015 which was initiated in New Zealand and China in 2014 for global market opportunities	• Initiate proof-of-concept studies and partnering discussions 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 Calf and Neonorm Foal are our lead non-prescription products to improve gut health and normalize stool formation for preweaned dairy calves with scours, and to promote normal fecal formation and reduce fluid loss in foals, respectively. 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 standardized botanical extract that is less refined than crofelemer and includes other 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 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 acute diarrhea in dogs as a secondary indication. 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 product approval and therefore 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, including formulations of Neonorm for sheep and other farm animals, we are seeking protocol concurrences with the FDA where appropriate. For example, we are planning a trial to develop a formulation of crofelemer for acute diarrhea in cats, and in December 2015 we completed a pilot safety study to evaluate the safety of crofelemer in adult horses, the first step in a planned development program for acute colitis.

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 plan to seek concurrence on all major regulatory trials.

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, and high value horse market. 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 production and companion animals, and high value horses.

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, preclinical and clinical development and regulatory strategy.

In addition to our near-term development efforts advancing Canalevia for dogs, Neonorm Calf for preweaned dairy calves, and Neonorm Foal for young horses, we are developing formulations of Canalevia and Neonorm to address the unmet medical need for the treatment of acute diarrhea and to improve gut health and normalize fecal 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 Calf and Neonorm Foal.

In 2014 we launched Neonorm in the United States under the brand name Neonorm Calf, and in December 2015 we conducted the soft launch of Neonorm Foal. We intend to establish a focused direct sales force, initially for the production animal markets, and have hired our first sales representatives. 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 CID in dogs, leveraging the sales and marketing capabilities established from our launch of Neonorm Calf and Neonorm Foal. As our focus shifts to companion animals and in anticipation of crofelemer development and registration for acute diarrhea in dogs and cats, our direct sales force will also increasingly target high-prescribing veterinarians for companion animals with relevant indications. We believe the third-party sales and distribution networks we establish in connection with our launch of Neonorm Calf and Neonorm Foal will be highly relevant for the companion animal market as well. In addition, while we believe Neonorm Calf and Neonorm Foal address smaller market opportunities than our companion animal product candidates, these are first-in-class products with the same novel mechanism of action as Canalevia. As such, Neonorm Calf and Neonorm Foal provide 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, in February 2015 we 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.

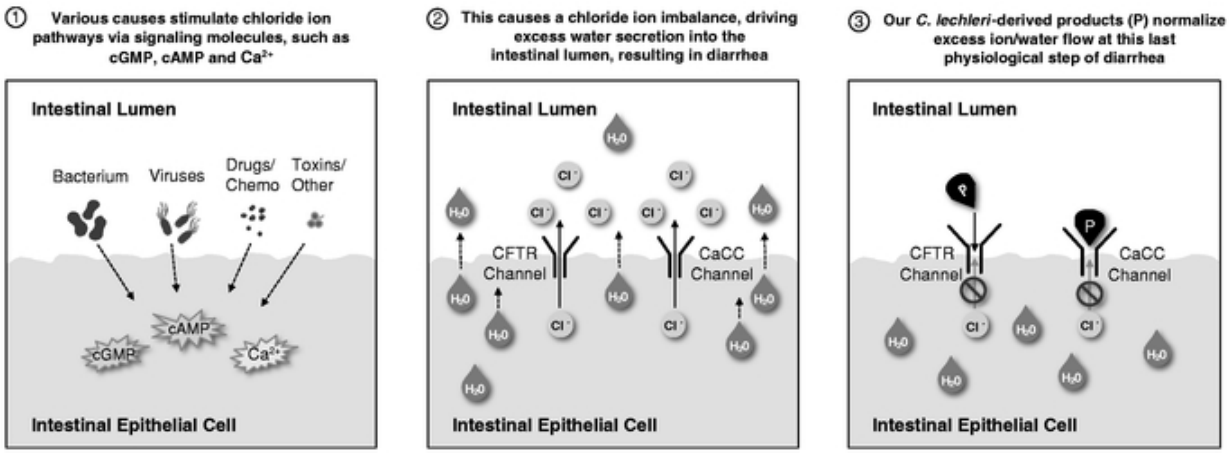
Products in Development

Market Background—Acute Diarrhea

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

We believe that an ideal treatment for acute diarrhea would directly address water loss without causing constipation, affecting normal peristaltic activity or altering normal body absorption of other drugs or normal physiological function of the gut. We believe addressing water loss associated with acute diarrhea will improve the quality of life of dogs and provide attendant benefits to the dog owner, improve the health and productivity of dairy cattle and provide similar health and economic benefits in multiple other species. 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 acute diarrhea. As a result, we believe that our products and product candidates may be effective in addressing acute diarrhea, regardless of cause. In addition, the channels that regulate this ion and water flow, including channels known as CFTR and CaCC (the sites of action of our gastrointestinal products), are generally present in mammals. We therefore expect that the clinical benefit shown in humans, preweaned dairy calves, foals, and dogs will be confirmed in multiple other species, including cats and adult horses. Accordingly, 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 acute 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 a three day, twice daily 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.In June 2015 we completed a multi-site pilot safety study involving the anticipated commercial formulation of Canalevia for CID, and in August 2015 we completed submission of all required major technical sections for the NADA for CID to the FDA for phased review. If we receive conditional approval from the FDA for this indication, we expect to launch Canalevia for CID in dogs by mid-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 concurrent with our ongoing clinical development program for the expanded indication of acute diarrhea in dogs. Canalevia 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 that we are aware of 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 acute diarrhea. As a result, we believe Canalevia may be effective in the treatment of acute 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 six months of age and older. Dosage levels varied within and across the studies: two single dose acute toxicity studies were conducted on four dogs each; two seven-day repeat administration studies were conducted on four dogs each; one 30-day repeat administration study was conducted on four dogs; and one nine-month repeat administration study on eight dogs. The toxicology studies in dogs showed minimal to no adverse effects following dosing up to approximately 50 times the anticipated efficacious dose. The clinical studies previously conducted in dogs also included multiple dose studies. We believe these studies will meet FDA requirements for a pivotal safety package and will support our anticipated dosing of Canalevia in dogs with CID. We expect to conduct safety studies in dogs as young as eight weeks of age to expand the labelled indication of Canalevia to include acute diarrhea.

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.

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

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 meetings with the FDA in October and June 2014 to reach agreement on the timing for submissions of the technical sections of an NADA filing. In August 2015 we completed submission of all required major technical sections for the NADA for CID to the FDA for phased review. If we receive conditional approval with MUMS designation, we could begin sales of Canalevia for this indication in Q2, 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 concurrent with our ongoing clinical development program for the expanded indication of acute diarrhea in dogs.

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

Canalevia—Expansion to Acute Diarrhea in Dogs

Overview

We are also developing Canalevia for acute diarrhea in dogs, regardless of cause. In December 2015 we initiated a pivotal field study to evaluate the safety and effectiveness of Canalevia for the treatment of acute diarrhea in dogs. According to the American Veterinary Medical Association, there were approximately 70.0 million dogs in the United States in 2012. In February 2015 we completed a randomized, blind, multicenter proof-of-concept study of Canalevia in dogs, with statistically significant results. Crofelemer, the API in Canalevia, demonstrated efficacy in numerous human clinical trials of acute watery diarrhea induced by various infectious pathogens, including *E. coli*, *V. cholera* and

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

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

We believe that Canalevia is an ideal treatment for acute diarrhea in dogs because of its demonstrated novel anti-secretory mechanism of action. If approved for use in acute diarrhea in dogs, we believe 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 a five-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, moist, 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.

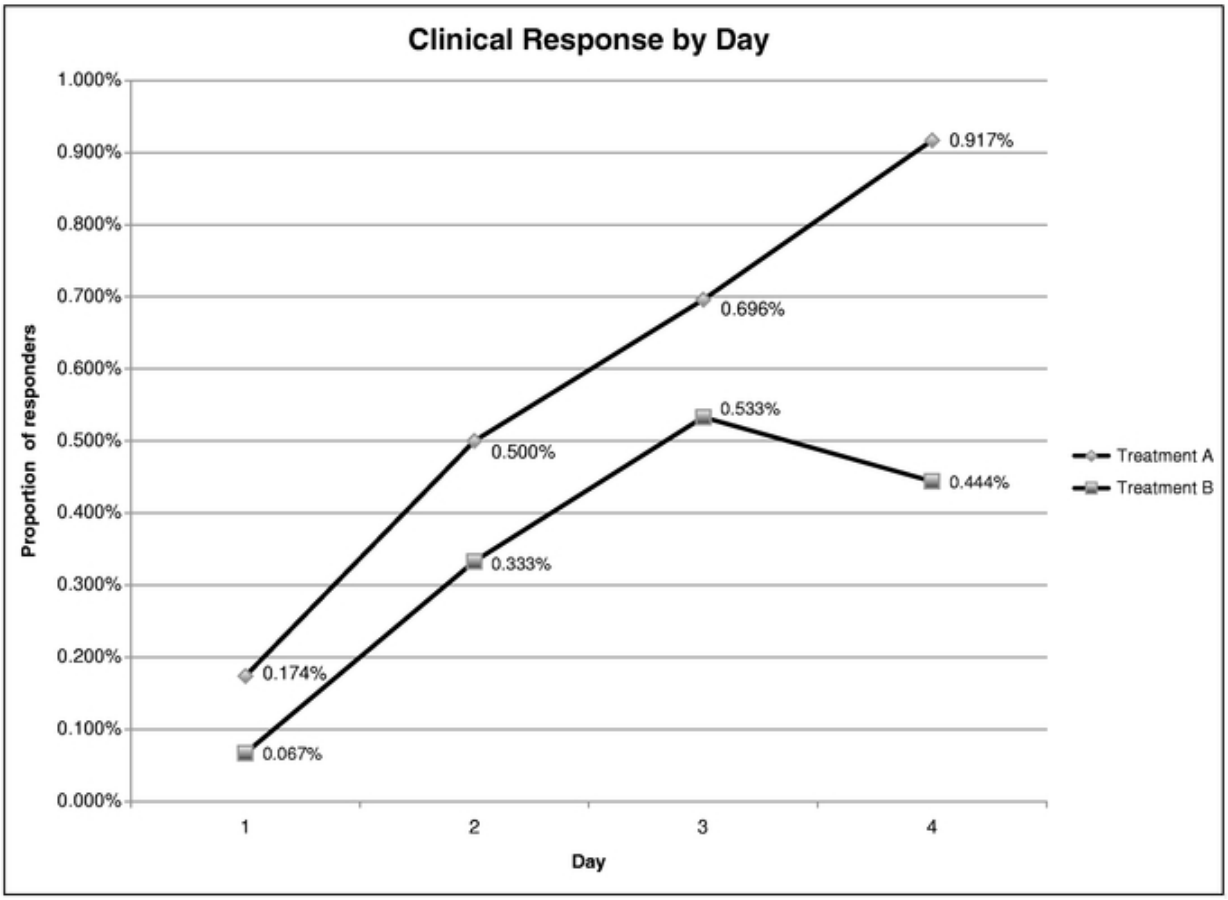
Resolution of Diarrhea. Using a definition of diarrhea resolution being a fecal score of 1 or 2 at any post-baseline time, 21 of 23 (91.3%) dogs on Canalevia responded. This contrasts with placebo, where 8 of 16 (50.0%) dogs responded. These response rates support the conclusion that a larger proportion 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 the 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 acute diarrhea. Based on the results, we are seeking protocol concurrence from the FDA and anticipate completing the pivotal trial to evaluate the safety and effectiveness of Canalevia for the indication of acute diarrhea in dogs in 2016. In December 2015 we initiated this pivotal trial. The prospective, blinded, randomized, placebo-controlled study will be conducted on an inpatient basis at private veterinary practices, animal shelters and animal rescues across the U.S. A single protocol will be followed at all sites, and enrolled dogs will remain on-site and be individually housed for the duration of the study. The study will enroll at least 150 dogs exhibiting secretory, or watery, diarrhea. Participating dogs will be randomized to receive either Canalevia or a placebo orally twice daily for three days. The study's primary endpoint will be to demonstrate a resolution of diarrhea. The study period will be divided into three 24-hour treatment periods followed by a 24-hour observation period, and fecal assessments will be completed at least six times daily. Study completion testing will include a physical examination, clinical pathology testing and a final fecal assessment.

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, and in December 2015 we completed a pilot safety study to evaluate crofelemer in adult horses, the first step in the development program for acute colitis. 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 rickettsia *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, which has been studied as a secretory type of diarrhea by third parties. Stress (*e.g.*, shipping, changes in daily routines, illness, hospitalization, surgery, 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 fecal samples to determine the exact source of the disease. We believe treatment of diarrhea associated with 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 diarrhea associated with 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 2017.

We are also developing a formulation of a *Croton lechleri*-derived product 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 has the potential to address both gastric and colonic ulcers in horses, as well as diarrhea. To our knowledge 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.

In November 2015 we initiated a proof-of-concept study to evaluate the safety and effectiveness of our investigational new animal drug currently referred to as SB-300. SB-300 is a pharmaceutical formulation of a standardized botanical extract from the *Croton lechleri* tree, for the treatment of gastrointestinal ulcers in horses. We completed enrollment for this study in December 2015. Enrollment criteria required patients to have both squamous and glandular gastric ulcerations, and top-line results from this prospective, masked, randomized, negative controlled study are expected to be available in February 2016. Until recently, treatment recommendations for equine ulcers have not differentiated between squamous and glandular disease. However, a series of recent third-party studies indicate considerably lower healing rates for glandular ulcers with standard of care (e.g. omeprazole). Subclinically, these lesions can compromise athletic performance.

We believe a product treating both gastric and colonic ulcers, pH maintenance, 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 74.0 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. We intend to conduct proof-of-concept and pivotal studies in cats in 2016. If data is positive, we anticipate initiating NADA filing in 2017.

Neonorm Calf—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 Calf 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 completed field studies of Neonorm Calf involving approximately 400 preweaned dairy calves in totalwith Cornell University and in collaboration with our distributor, Animart 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. In September 2015 we promoted the product at the Annual Conference of the American Association of Bovine Practitioners in New Orleans, and held an informational dinner gathering for bovine veterinarians during this conference. We also 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, expected to launch in 2016.

Scours Market Opportunity

Scours refers to watery diarrhea in production animals, including dairy calves, which results from infectious agents that cause the secretion of ions and water into the intestinal lumen. Animals with scours may experience severe dehydration and electrolyte imbalance, which can lead to renal insufficiency, nutritional deficiencies, lower production in dairy cattle and even death. Current therapy 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 lactating dairy cows in the United States. We estimate from USDA sources that there were over 11.0 million dairy calves born in 2013. Dairy cows are continuously bred, both to maintain lactation and to produce dairy calves to maintain the herd. Dairy calves are separated from their mothers shortly after birth and raised on commercial milk replacers until weaned at about 60 days of age. Almost one in four, or 23.9%, of dairy heifer calves had diarrhea or other digestive problems according to the USDA Dairy 2007 study. Scours, diarrhea or other digestive problems are responsible for more than half of all preweaned calf deaths, and result in supportive care and treatment costs, impaired weight gain and long-term reduction in milk

production. Of dairy farm operations surveyed in the Dairy 2007 study, 62.1% used antibiotics for diarrhea or other digestive problems, including preweaned heifer calves not reporting diseases or disorders. Of preweaned calves that were affected by diarrhea or other digestive problems, almost three-fourths, or 74.5%, were treated with an antibiotic.

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

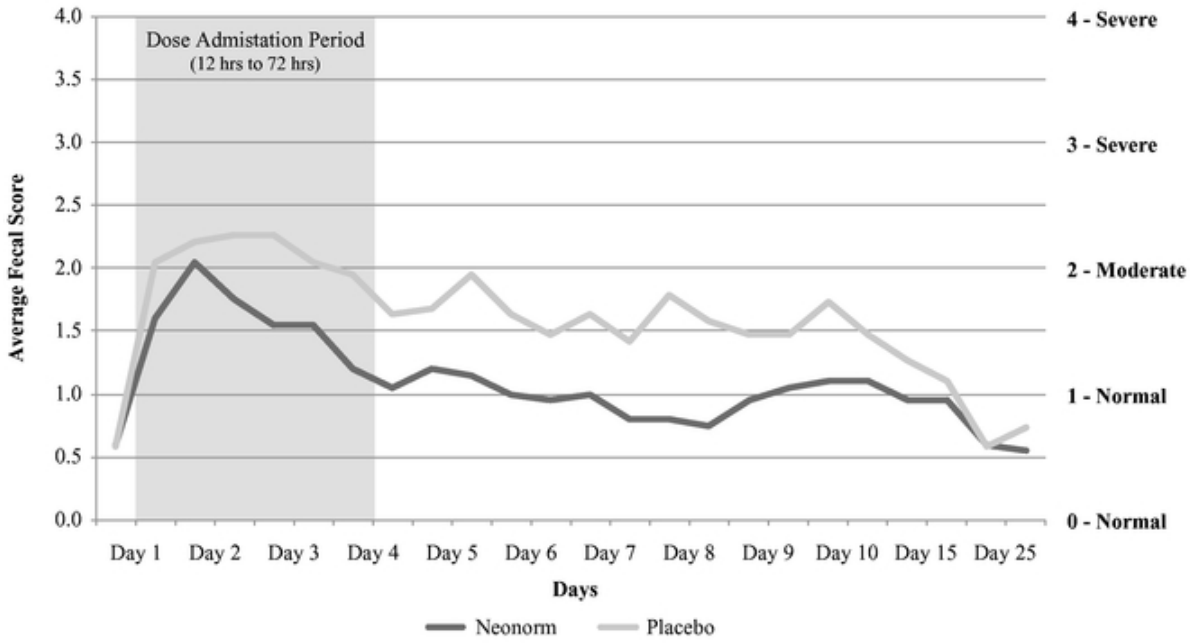
University of Wisconsin Calf Health Scoring Chart, modified to track a subset of the most severe, and potentially fatal, watery diarrhea, which we scored as 4, as set out in the following chart.

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 antibiotics
	4	Diarrhea with blood	

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.

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.

In September 2015 we announced the publication of this study titled "*Effect of crofelemer extract on severity and consistency of experimentally induced enterotoxigenic Escherichia coli diarrhea in newborn Holstein calves*" in the official journal of the American Dairy Science Association, *Journal of Dairy Science*—a leading peer-reviewed dairy research journal.

To support our commercial launch, we completed field studies of Neonorm involving approximately 400 preweaned dairy calves in total at Cornell University and in collaboration with our distributor, Animart.

In June 2015 we announced the results of a field study conducted in association with Cornell University that confirm that Neonorm Calf offers a beneficial effect in supporting weight gain in preweaned calves at 60 days of life. The study, which involved 200 preweaned dairy calves, was initiated to examine the relationship between Neonorm Calf treatment and the changes that this treatment leads to in preweaned weight gain and daily fecal dry weight. While no difference was seen in the fecal dry weight score, the results of the study confirmed the beneficial effect in average daily weight gain observed during the initial challenge study in newborn dairy calves completed at Cornell in 2014. Average daily weight gain influences lifetime productivity for dairy cattle, as 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.

On average, each calf receiving Neonorm Calf treatment in the above-referenced Cornell study gained approximately 1.2 kilograms more than the placebo-treated calves during the preweaning period. This data confirms the findings of the challenge study. 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 and costs of supportive care, and that approximately 44% of the $110 savings is attributable to improvements in future milk production that results from Neonorm Calf-induced weight gain. 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.

In October 2015 we announced the results of a field study conducted in Wisconsin that we believe further support the beneficial effects of Neonorm Calf in reducing water loss associated with diarrhea and supporting weight gain in preweaned dairy calves. The objectives of the double blind, randomized, placebo-controlled field study, which involved 200 preweaned dairy calves, were to evaluate the efficacy of Neonorm Calf on the normalization of stool formation in the animals and evaluate the effect of treatment on pre-wean weight gain in a real-life dairy farm setting. All participating calves received an enteric-coated bolus or a placebo, twice a day for three days. The fecal consistency of participating calves was scored on a daily basis using the Calf Health Scoring criteria for fecal consistency from the University of Wisconsin.

On average, during the three-day treatment period, each calf with watery stool that received Neonorm Calf treatment gained approximately 2.2 kilograms more than placebo-treated pre-weaned calves with the same fecal score, while the pre-wean weight gain for all participating treated calves was 0.45 kilograms more than for the full group of placebo-treated animals. Pre-wean weight influences lifetime productivity for dairy cattle, as preweaning nutrition has a significant effect on mammary gland development, the timing of puberty, and the age at which dairy cows first produce milk.

Following day one of treatment, 27.3% of treated calves achieved normalized stool formation, versus 19.4% of placebo-treated calves. Following day two of treatment, 63.6% of treated calves achieved normalized stool formation, versus 60.2% of placebo-treated calves, and, following day three of treatment, 85.9% of treated calves achieved normalized stool formation, versus 83.7% of placebo-treated calves. Each of the results achieved borderline statistical significance.

We believe this study indicates the beneficial effect of Neonorm Calf, in real-world conditions involving animals that were simultaneously being provided with an array of probiotics, antibiotics, and other medicines by their handlers as part of their normal standard of care. Given this "uncontrolled" aspect of the study, we are pleased to see the additive benefit of the new mechanistic approach of Neonorm Calf, which increases the percentage of responding calves with each day of treatment and continues to display an associated beneficial effect that supports weight gain. We believe this study further demonstrates the potential for Neonorm Calf to be a novel, first-in-class product that provides health and economic benefits to the dairy industry beyond its current standards. Additionally, in October 2015 we announced an analysis by researchers from the Cornell challenge study supports a benefit of Neonorm Calf on the optimization of the intestinal microbiome profile in pre-weaned dairy calves. The microbiome is a community of microorganisms that live normally in the gut and are vital to maintenance of gut health. The objective of the study was to characterize the fecal microbiota of newborn calves experiencing diarrhea induced by enterotoxigenic *Escherichia coli* (*E. coli*) and identify possible relationships of treatment with a standardized, enteric-coated botanical extract derived from the *Croton lechleri* tree, the key composition of Neonorm Calf, and the altering of the intestinal microbiota profiles of the calves. The results show that the relative abundance of *Faecalibacterium*, a bacteria genus regarded as beneficial to the host, increased in treated calves when compared to control calves. Additionally, treated calves had a higher relative abundance of *Faecalibacterium* following cessation of treatment.

There were no negative controls used in the 2013 Cornell challenge study, as all calves were challenged with *E. coli* to bring on diarrhea. Nevertheless, although this challenge could have altered the natural course of the microbiome evolution, we were still able to see results in the recently completed microbiome study supporting a beneficial prebiotic mechanism of Neonorm Calf. This

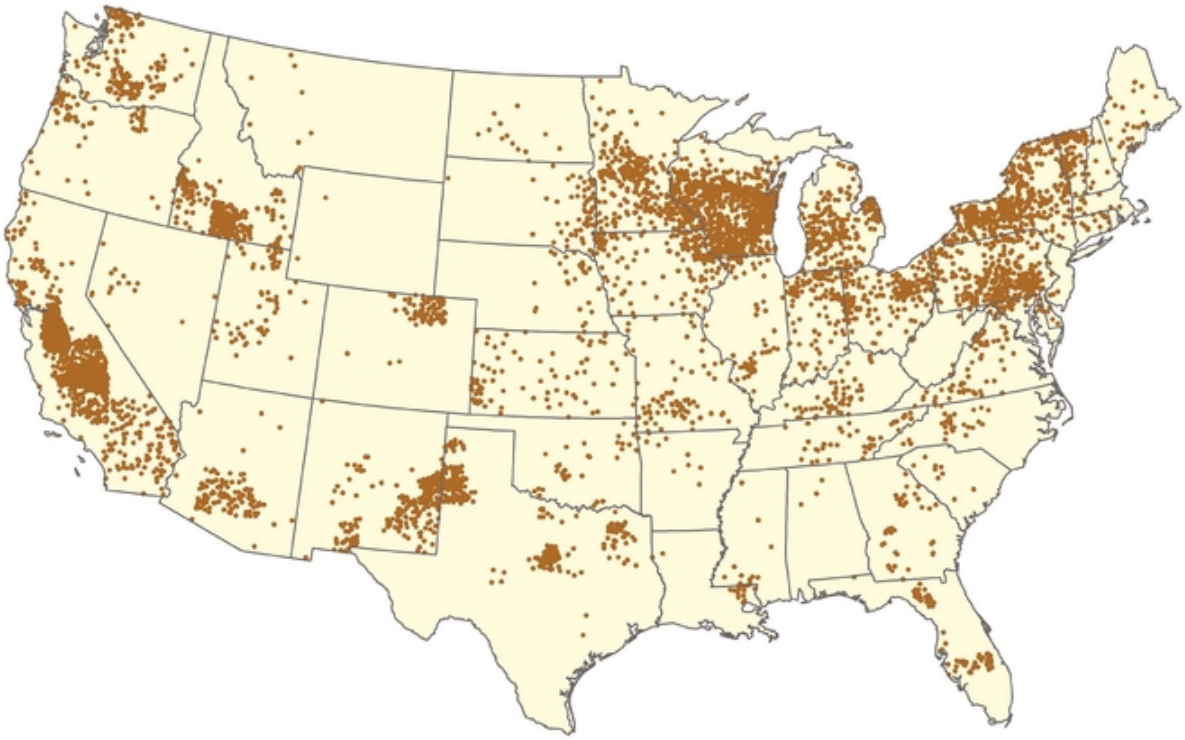
mechanism would supplement and is potentially synergistic with the anti-secretory and weight gain benefits of Neonorm Calf.

The Cornell team will continue to investigate this potential prebiotic benefit with us, and in January 2016 we initiated a prophylactic study with a formulation that can be administered in watery and/or milk replacer for entire herd management.

Commercialization Plans

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. In February 2014 we 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 22.0 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 Calf and line extension products.

In December 2015 we conducted the soft launch of Neonorm Foal, our lead non-drug product to promote normal fecal formation and reduce fluid loss in foals. We are planning studies of an equine formulation of Neonorm for adult horses with episodic diarrhea. Published studies estimate that there were 9.2 million horses in the United States in 2005. Diarrhea is among the most common clinical complaints in foals. Often, diarrhea occurs in the first 30 days of the foal's life, both from infections and non-infectious causes, such as lactose intolerance and overfeeding. Some cases are severe and life threatening. A majority of foals will exhibit diarrhea at some point within the first two months of life. In adult horses, episodic diarrhea is mostly associated with diseases of the large intestine and damage to the colon or disturbance of colonic function. Typically, diarrhea in horses is treated with fluid replenishment and electrolytes, deworming agents and antibiotics, and intestinal protectants and absorbents, as well as anti-motility agents. To our knowledge there are currently no anti-secretory products approved by the FDA for veterinary use.

In December 2015 we announced positive results for an exploratory, investigator-initiated follow-up study which assessed the safety and performance of Neonorm Foal, without inclusion of a probiotic, in pre-weaned foals with watery diarrhea. This six-day, multi-site study (ARG102) involved 20 foals suffering from secretory, or watery, diarrhea, all of which were placed into one treatment group. During the treatment period, which lasted 72 hours, Neonorm Foal was administered orally, in paste formulation, twice daily for six treatments. In this study, a non-enteric form of Neonorm Foal was used. The treatment period was followed by a 72-hour observation period. Fecal scoring was conducted every six hours during both the treatment and observation periods. The study took place in Argentina, during the southern hemisphere foaling season.

In November 2015 we completed an initial proof-of-concept study (NEO101) of Neonorm Foal in Argentina that involved 60 foals. The objective of this earlier, randomized, multi-site, blinded, placebo-controlled study was to evaluate the safety and performance of the product for treatment of foals suffering from secretory diarrhea, and the treated animals received Neonorm Foal in combination with a third-party probiotic. The results of a meta-analysis between the two studies demonstrated a significantly higher percentage of foals with clinical response and resolution of diarrhea for Neonorm Foal, from either ARG102 or NEO101, compared with the placebo group in NEO101.

During the 72-hour treatment period, 35% of placebo-treated foals in NEO101 were identified as clinical responders, compared with 85% of foals treated with Neonorm Foal in ARG102. For the purposes of both studies, clinical responders were defined as foals that achieved a formed stool by the end of the reported period.

During the 72-hour treatment period, resolution of diarrhea was observed in 41% of placebo-treated foals in NEO101 compared with 85% of foals treated with Neonorm Foal in ARG102. For the purposes of both studies, resolution of diarrhea was defined as a foal that produced a formed stool at any point during the reported period.

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. In December 2015 we conducted the soft launch of Neonorm Foal, our non-prescription product, to promote normal fecal formation and reduce fluid loss in foals. 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 representatives 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 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 a publication called Animal Pharm. 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, 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 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 both Neonorm Calf and Neonorm Foal. This manufacturing process uses exclusive Napo intellectual property licensed pursuant to the Napo License Agreement. Canalevia will be manufactured by the same process used to manufacture the API that was used in the animal safety studies and the human studies in support of the approval of 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.

In December 2015, Indena delivered 360 kilos of the standardized botanical extract to us. We currently own enough of the Neonorm standardized botanical extract to formulate a combination of approximately one million treatments of Neonorm Calf or Neonorm Foal.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 as amended, 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 were paid in May 2015;
- fees associated with the technology transfer and manufacturing process adaptation equal to €620,000 for API which was paid in May and July 2015;
- fees for the design and set up of a dedicated suite qualified for pharmaceutical and veterinary products equal to €170,000 which was paid in May 2015;
- deliverables fees equal to €500,000, €250,000 of which was paid in December 2015, and €250,000 of which is payable by the end of March 2016, with the understanding that these fees will be credited against payments agreed to under the future commercial supply agreement; and
- a €300,000 bonus fee payable in two equal installments, the first of which was paid in March 2015, with the remainder paid by the end of March 2016.

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 our initial public offering. In July 2015 and December 2015 Indena, S.p.A agreed to delay payment of certain fees payable until March 2016. As of December 2015 we owe Indena S.p.A €400,000 or $440,000 converted at $1.10 per Euro. 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.

In September, 2015 we entered into a distribution agreement with Glenmark Pharmaceuticals Ltd., or Glenmark. With the execution of the agreement, we intend to use Glenmark as our primary manufacturer of crofelemer for animal health use. Our agreement with Glenmark supplements our previously announced manufacturing agreement with Indena S.p.A for the standardized botanical extract in Neonorm Calf and Neonorm Foal. We intend to eventually use Indena as an alternative supplier for crofelemer.

In October 2015, we announced that we signed a crofelemer formulation development and manufacturing contract with Patheon Pharmaceuticals Inc., or Patheon, a leading global provider of drug development and delivery solutions to the global pharmaceutical and biopharma industries. Under the terms of the contract, Patheon will provide enteric-coated crofelemer tablets for Jaguar for use in animals. The tablets will be used in our pivotal efficacy trial for Canalevia, which began in the fourth quarter of 2015. We expect to use safety and effectiveness data from this trial in support of the initiation of the filing of a NADA with the FDA for Canalevia in 2016 for the indication of acute diarrhea in dogs.

Patheon is the manufacturer of Fulyzag, a human-specific, enteric-coated formulation of crofelemer that was approved by the FDA in 2012 for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS in antiretroviral therapy. Members of our management team developed crofelemer while working at Napo where the drug was initially developed.

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 standalone animal health company that was spun out from Pfizer, Inc. in 2013, as well as subsidiaries of large pharmaceutical companies, including Novartis Animal Health Inc., a subsidiary of Novartis International AG., Merck Animal Health, the animal health division of Merck & Co., Inc., Merial Inc., the animal health division of Sanofi S.A., Elanco Animal Health, the animal health division of Eli Lilly and Company, Bayer Animal Health GmbH, a subsidiary of Bayer AG, and Boehringer Ingelheim Animal Health, the animal health division of Boehringer Ingelheim GmbH. There are also animal health companies based in Europe, including Vétoquinol S.A., Virbac S.A., Dechra Pharmaceuticals PLC and Ceva Animal Health S.A.

Additionally, smaller animal health companies, such as Aratana Therapeutics, Inc., Kindred Biosciences, Inc., Phibro Animal Health Corporation, Nexvet Biopharma and Parnell Pharmaceuticals Holdings Ltd, recently completed initial public offerings of their stock in the United States and may choose to develop competitive products. We believe that the large human pharmaceutical companies may also decide to spin out their animal health subsidiaries into standalone companies.

Although, to our knowledge, there are currently no FDA-approved anti-secretory products to treat acute 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 acute diarrhea in dogs with antibiotics, probiotics, dietary restrictions and products approved and formulated for humans, such as Imodium and other anti-motility agents, as well as binding agents that absorb water, such as Kaopectate and Pepto-Bismol. None of these treatment options address the water loss associated with acute diarrhea. 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 contain or are derived from the licensed Napo technology (collectively referred to herein as the Products) worldwide in the field of veterinary treatment uses and indications for all species of animals.

In consideration for the license, 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

In 2015, we paid $1.2 million in accordance with the agreement and owe $425,000 as of December 31, 2015.

Pursuant to the Napo License Agreement,, 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. Upon agreement with Napo, 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.

Jaguar and Napo are also engaged in preliminary exploratory discussions to review a potential merger and/or other ways to cooperate with their respective business endeavors.

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* or *Calophyllum spp.* (such as crofelemer and Neonorm), and methods of treating watery diarrhea using the enteric protected formulations for both human and veterinary uses. As such, the patents and patent applications of this family cover certain formulations of crofelemer, including Canalevia, as well as the standardized botanical extract in Neonorm, and methods of treating diarrhea using these formulations. There are three U.S. patents and a pending U.S. patent application in this family, including, US 7,323,195, which has a term until at least June 7, 2018, US 7,341,744, which has a term until at least January 11, 2018, and US 8,574,634, which has a term until at least January 11, 2018. The term of one of US 7,323,195 or US 7,341,744 may be extended to June 2021 and December 2020, respectively, to account for regulatory delay in obtaining human marketing approval for crofelemer (such potential extensions have been filed for and only one of the patents can be extended). Patent protection for enteric protected formulations of crofelemer and methods of use has also been obtained outside the United States, including in Europe, Australia, Canada, India, Japan,

Korea, Mexico, New Zealand and Taiwan, with terms extending until at least October 14, 2017 in these jurisdictions. In particular, European patent EP 0 935 417 and Japanese patent no. 4195728 provide protection for enteric protected formulations of crofelemer and the standardized botanical extract in Neonorm in Europe and Japan, respectively, with terms that extend until at least October 14, 2017.

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 (along with US 8,962,680, covering treatment of diarrhea in HIV positive subjects) 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-drug 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 and have currently pending three applications under the PCT, one U.S. non-provisional patent application and eight provisional patent applications relating to veterinary uses of *Croton* proanthocyanidin polymer compositions, including crofelemer, Neonorm and Canalevia, and product combinations under development. These applications are directed to treatment of watery diarrhea in newborn and young animals, including methods of improving mortality and weight gain in newborn animals, treatment of stress-induced diarrhea in animals, and treatment of watery diarrhea caused by salmonella in animals. These applications also focus on the treatment of diarrhea in companion animals such as dogs and cats. In addition, an application has been submitted for the treatment of ulcers and related symptoms in animals with an emphasis on 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.

In October 2015 we announced that the U.S. Patent and Trademark Office (USPTO) issued Notices of Allowance in two pending patent applications, one of which has issued a U.S. patent, licensed exclusively from Napo to Jaguar for veterinary use, covering NP-500 and its use. NP-500 is the API in Jaguar's drug product candidates to treat and manage diseases related to insulin-resistance, such as obesity-related metabolic dysfunction in dogs and cats, diabetes mellitus, and potentially equine laminitis. The two NP-500 pending patent applications claim benefit to a provisional application submitted to the USPTO by Napo in April 2011. Per the terms of the license agreement between Napo and us, we have an exclusive license to these intellectual property for all veterinary treatment uses and indications for all species of animals except humans.

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

The approval of prescription drugs intended for animal use is regulated by the FDA's Center for Veterinary Medicine, or CVM. The CVM consists of six offices that work together to, in part, approve new drugs for commercialization and thereafter monitor those commercialized drugs once in the market. The Office of New Animal Drug Evaluation, or ONADE, is the lead office for reviewing novel drug candidates. 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, human food safety studies. These food safety studies are 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 that are intended to be used in a major species defined as dogs, cats, cattle, horses, chickens, turkeys and pigs to treat diseases which occur infrequently or in limited geographic areas, therefore having an impact on a smaller number of animals on a yearly basis; and second, to encourage the development and availability of animal drugs for use in minor species (defined as all animals other than humans that are not one of the major species). the drug sponsor may seek conditional approval of the drug product provided the Office of Minor Use Minor Species, or "OMUMS" acknowledges that the intended use fits within a small number of animals treated per annum. A drug does not have to be designated to be eligible for conditional approval, however if OMUMS designates a MUMS drug, certain incentives and exclusivities are available to the sponsor. The MUMS designation is modeled on the orphan drug designation for human drug development and has certain financial incentives available to encourage MUMS drug development such as the availability of grants to help with the cost of the MUMS drug development Also, drug developers of MUMS drugs are eligible to apply for a waiver of the user fees once the MUMS designation has been given by OMUMS. 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. To obtain conditional approval of a MUMS drug, the company must submit CMC and safety data similar to that required for an NADA, as well as data suggesting a reasonable expectation of effectiveness. After the submission and the review of the application, the FDA through the CVM can then grant a conditional approval (CA-1). This approval allows for a commercialization of the product, while the sponsor continues to collect the substantial evidence of effectiveness required for a full NADA approval. The sponsor has up to five years to demonstrate substantial evidence of effectiveness for a previously conditionally approved drug. Ideally, MUMS designation helps move the product forward in development; however it may not shorten the time to full commercialization. A sponsor that gains approval or conditional approval for a MUMS designated drug receives seven years of marketing exclusivity.

Protocol Concurrence

We pursued protocol concurrence from the FDA for the pivotal trial of Canalevia that we initiated in December 2015 for acute diarrhea in dogs, and plan to pursue protocol concurrences from the FDA for future pivotal trials in this and other indications. Under this process, a protocol is submitted to the FDA voluntarily by a drug sponsor. The FDA review of the protocol for a pivotal study makes it more likely that the study will generate information the sponsor needs to demonstrate whether the drug is safe and effective for its intended use. It creates an expectation by the sponsor that the FDA will not later alter its perspectives on these issues unless public or animal health concerns appear that were not recognized at the time of protocol assessment. Even if FDA issues a protocol concurrence, ultimate approval of an NADA by the FDA is not guaranteed because a final determination that the

agreed-upon protocol satisfies a specific objective, such as the demonstration of efficacy, or supports an approval decision, will be based on a complete review of all the data submitted to the FDA. Even if 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 some of our prescription drug products and if we receive such a designation, we will be 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 December 31, 2015, we had 23 employees. Of our employees, five hold D.V.M. or Ph.D. degrees and ten 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 sublease 6,008 rentable square feet of office space from SeeChange Health Management Company, Inc. Our sublease agreement expires on August 31, 2018. 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 convert our current sublease to a lease by August 31, 2018 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 December 31, 2015:

Name	Age	Position
Lisa A. Conte	56	Chief Executive Officer, President and Director
Steven R. King, Ph.D.	58	Executive Vice President, Sustainable Supply, Ethnobotanical Research and Intellectual Property and Secretary
Karen S. Wright	60	Chief Financial Officer
James J. Bochnowski(1)(2)(3)	72	Chairman of the Board of Directors
Jiahao Qiu(1)	30	Director
Zhi Yang, Ph.D.(1)	60	Director
Folkert W. Kamphuis(2)(3)	56	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.

Karen S. Wright. Ms. Wright has served as our Chief Financial Officer since December 15, 2015. Prior to joining us, Ms. Wright served as head of finance for Clene Nanomedicine, Inc., beginning in August 2014. From June 2011 to May 2014, Ms. Wright served as vice president of finance and

corporate controller at Veracyte, Inc., and from 2006 to 2011, she served as vice president of finance, corporate controller and principal accounting officer of VIA Pharmaceuticals, Inc. Ms. Wright holds a BS in Accounting and Marketing from the University of California Walter A. Haas School of Business.

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. 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.

Folkert W. Kamphuis Mr. Kamphuis has served as a member of our board of directors since June 2, 2015. Mr. Kamphuis currently has his own consulting business. He most recently served as a member of the Executive Committee of the animal health unit of Swiss pharmaceutical giant Novartis until its acquisition by Elanco. Mr. Kamphuis joined Novartis Animal Health in 2005, and held several executive positions from 2012 to 2014 as General Manager North American and as Chief Operating Officer from 2009 to 2012 and Head of Global Marketing and Business Development from 2005 to 2009. Prior thereto, Mr. Kamphuis spent 20 years in various executive, business development and global marketing roles at Pfizer/Pharmacia Animal Health and Merial/Merck AgVet.
Mr. Kamphuis served a total of 10 years on the IFAH-Europe board, of which 9 years as treasurer. Mr. Kamphuis holds a B.A. in Marketing from the Dutch Institute of Marketing, Amsterdam, the Netherlands, and a MSc in Animal Nutrition from the Wageningen University and Research Center, Wageningen, the Netherlands.

We believe Mr. Kamphuis is qualified to serve on our board of directors due to his extensive experience and education in the animal health sector and is an experienced executive and strategist in animal health care companies who designs creative and effective companies.

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 consists of five 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.

Four of the five directors that comprise our board are independent within the meaning of the independent director rules of the NASDAQ Stock Market, LLC, or NASDAQ.

Our board of directors are 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 are Ms. Conte and Mr. Bochnowski.

The Class II director is Mr. Qiu.

The Class III directors are Dr. Yang and Mr. Folkert.

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 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 are 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 is 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 is 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

Our common stock is listed on The NASDAQ Capital Market. Under the NASDAQ rules, independent directors must comprise a majority of a listed company's board of directors within a specified period of the closing of our initial public 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 four of our five directors do not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the NASDAQ rules. Our board of directors also determined that Mr. Bochnowski (chairperson), Mr. Qiu and Dr. Yang, who comprise our audit committee, Mr. Bochnowski (chairperson) and Mr. Kamphuis, who comprise our compensation committee and Mr. Bochnowski (chairperson) and Mr.Kamphuis, who 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

Audit Committee

The members of our audit committee are Mr. Bochnowski, Mr. Qiu and Dr. Yang. Mr. Bochnowski is the chairperson of the audit committee. Our audit committee's responsibilities 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 are Mr. Bochnowski and Mr. Kamphuis. Mr. Bochnowski is the chairperson of the compensation committee. Our compensation committee's responsibilities 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 Mr. Kamphuis 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 are Mr. Bochnowski and Mr. Kamphuis. Mr. Bochnowski is 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. A current copy of the code is 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 second amended and restated certificate of incorporation and amended and restated bylaws 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 second amended and restated certificate of incorporation provides that we indemnify our directors to the fullest extent permitted by Delaware law. In addition, our amended and restated bylaws provide that we indemnify our directors and officers to the fullest extent permitted by Delaware law. Our amended and restated bylaws 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 second amended and restated certificate of incorporation and amended and restated bylaws 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 second 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.

In June 2015, we granted Mr. Bocknowski, our Chairman of the Board, a stock option to acquire 20,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In June 2015, we granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 50,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In June 2015, we granted Mr. Qui, a member of the Audit Committee, a stock option to acquire 10,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In June 2015, we granted Dr. Yang, a member of the Audit Committee, a stock option to acquire 10,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth the compensation for services paid in all capacities for the years ended December 31, 2015, 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	2015	$ 421,539	45,000	0	0	12,001	478.540
President and Chief Executive	2014	330,769	0	236,797	86,071	10,055	663,692
Officer	2013	0	0	0	0	0	0
Steven R. King, Ph.D.	2015	$ 268,731	19,125	0	0	26,568	314,424
Executive Vice President,	2014	210,865	0	160,383	50,208	18,226	439,682
Sustainable Supply, Ethnobotanical Research and Intellectual Property	2013	0	0	0	0	0	0
Karen S. Wright	2015	$ 32,308	0	18,126	0	0	50,434
Chief Financial Officer and Treasurer(4)							
John A. Kallassy	2015	$ 265,808	24,836	45,100	7,666	26,568	369,978
Chief Operating Officer,	2014	181,731	0	118,398	43,035	19,207	362,371
Former Chief Financial Officer and Former Treasurer(5)	2013	0	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.

(4) Ms. Wright has served as Chief Financial Officer and Treasurer since December 15, 2015.

(5) Mr. Kallassy resigned as Chief Financial Officer and Treasurer on December 15, 2015.

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, 2015.

Name	Options Vesting Commencement Date	Number of Securities Underlying Unexercised Options		Option Exercise Price	Option Expiration Date	Number of Securities Underlying Unexercisable RSUs(4)
		Exercisable	Unexercisable			
Lisa A. Conte	04/01/2014	89,100	71,283(1)	$ 2.54	04/01/2024	17,820
Steven R. King, Ph.D.	04/01/2014	51,975	41,581(1)	$ 2.54	04/01/2024	10,395
Karen S. Wright	08/09/2016	0	20,000(2)	$ 2.04	11/23/2025	0
John A. Kallassy	04/01/2014	44,549	35,642(1)	$ 2.54	04/01/2024	8,910
John A. Kallassy	09/19/2014	5,567	13,365(3)	$ 7.00	05/13/2025	1,484

(1) On January 1, 2015, 25% of each of such 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) The shares were granted on November 23, 2015. On August 9, 2016, 25% of such named executive officer's shares will vest and become exercisable. The remainder of the shares are scheduled to vest in approximately equal monthly installments through November 9, 2018, subject to continued service with us through each relevant vesting date.

(3) The shares were granted on May 18, 2015. On August 18, 2015, 1/12th of the shares will vest and become exercisable, with the remainder vesting in equal monthly installments such that it vests in full on August 18, 2019.

(4) 50% of the shares of common stock underlying the RSUs vested and became issuable on January 1, 2016, and assuming compliance with the terms of the RSU award agreement, the remaining 50% of the shares of common stock underlying the RSUs will vest and be issuable on July 1, 2017.

Executive Employment Agreements

Lisa A. Conte

In March 2014, 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. Effective June 15, 2015, our board of directors has reviewed the terms of Ms. Conte's employment arrangement in connection with its annual compensation review, and has adjusted Ms. Conte's base salary to $440,000. Ms. Conte is entitled to participate in all employee benefit plans, including group health care plans and all fringe benefit plans.

In April 2014, Ms. Conte was granted a stock option to purchase 160,383 shares of common stock at an exercise price of $2.54 per share. The option has a 10 year term and vests as follows: 25% 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. As a result of our initial public offering on May 18, 2015, 50% of the shares of common stock underlying the RSUs are vested and became 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. Effective June 15, 2015, our board of directors has reviewed the terms of Dr. King's employment arrangement in connection with its annual compensation review, and has adjusted Dr. King's base salary to $280,500. Dr. King is entitled to participate in all employee benefit plans, including group health care plans and all fringe benefit plans.

In April 2014, Dr. King was granted a stock option to purchase 93,556 shares of common stock at an exercise price of $2.54 per share. The option has a 10-year term and vests as follows: 25% 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. As a result of our initial public offering on May 18, 2015, 50% of the shares of common stock underlying the RSUs are vested and became 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. Effective June 15, 2015, our board of directors has reviewed the terms of Mr. Kallassy's employment arrangement in connection with its annual compensation review, and has adjusted Mr. Kallassy's base salary to $286,500 and his target bonus was increased to 35% of his base salary. Mr. Kallassy is entitled to participate in all employee benefit plans, including group health care plans and all fringe benefit plans.

In April 2014, Mr. Kallassy was granted a stock option to purchase 80,191 shares of common stock at an exercise price of $2.54 per share. The option has a 10-year term and vests as follows: 25% vested on January 1, 2015, 9 months after the grant date, with the remainder vesting equally over the next 27 months such that the option is vested in full on April 1, 2017. In June 2014, Mr. Kallassy was granted 8,910 RSUs and in February 2015, Mr. Kallassy was granted 1,484 RSUs. As a result of our initial public offering on May 18, 2015, 50% of the shares of common stock underlying the RSUs are vested and became 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 granted an option to purchase 13,365 shares of common stock at an exercise price equal to $7.00, which was the initial public offering price of our common stock. 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.

Karen S. Wright

In October 2015, we entered into an offer letter with Ms. Wright to serve as our Executive Vice President, Finance, effective November 9, 2014, in an at-will capacity. On December 15, 2015 the Board of Directors approved Ms. Wright's appointment to serve as our Chief Finance Officer. Under the offer letter, Ms. Wright's annual base salary is $240,000, she is eligible for an annual target bonus of 25% of her base salary, and she is eligible to participate in the employee benefit plans we offer to our other employees.

In November 2015, Ms. Wright was granted a stock option to purchase 20,000 shares of common stock at an exercise price of $2.04 per share. The option has a 10-year term and vests as follows: 25% vests on August 9, 2016, 9 months after the hire date, with the remainder vesting equally over the next 27 months such that the option is vested in full on November 9, 2018.

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 became effective in May 2015. The 2014 Plan provides for the grant of incentive stock options to our eligible employees, and for the grant of nonstatutory stock options, restricted stock, and RSUs to eligible employees, directors and consultants.

Authorized Shares

We 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

The 2014 Plan is administered by the compensation committee of our board of directors, or the committee, or our board of directors, acting as the committee. In the case of awards intended to qualify as "performance-based compensation" within the meaning of Section 162(m) of the Code, the committee will consist of two or more "outside directors" within the meaning of Section 162(m) of the Code. In addition, if we determine it is desirable to qualify transactions under the 2014 Plan as exempt under Rule 16b-3, such transactions will be structured to satisfy the requirements for exemption under Rule 16b-3. Subject to the provisions of the 2014 Plan, the committee has the power to administer the 2014 Plan, including but not limited to, the power to interpret the terms of the 2014 Plan and 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.

A total of 333,333 shares of common stock have been approved by the board of directors and our shareholders for issuance under the 2014 Plan. As of December 31, 2015, options to purchase 226,500 shares of our common stock were outstanding under the 2014 Plan and 106,833 shares are available for grant. In 2015, the board of directors approved the grant of 90,000 stock options to members of our board of directors, 126,500 stock options to newly hired employees and 25,000 stock options to a consultant under the 2014 Plan. As a result of employee turnover, 15,000 previously granted options were cancelled in 2015.

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 was terminated in May 2015 in connection with our initial public offering and replaced by the 2014 Plan, although the 2013 Plan continues to govern the administration of awards made prior to its replacement by the 2014 Plan.

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, 2015, options to purchase 693,006 shares of our common stock and RSUs covering 55,536 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. In May 2015 the board of directors granted stock options to purchase 176,364 shares of common stock under the 2013 Plan to our executive officers and employees. Such stock options have an exercise price equal to $7.00. As a result of employee turnover, 47,128 previously granted options were cancelled in 2015.

The 2013 Plan and outstanding stock awards are administered by the 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. As of May 13, 2015, we are no longer a majority-owned subsidiary of Napo.

Jaguar and Napo, however, are also engaged in preliminary exploratory discussions to review a potential merger and/or other ways to cooperate with their respective business endeavors.

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 were located in San Francisco, California, where we rented approximately 3,125 square feet of office space. Since our formation in June 2013 through June 2015, we shared premises with Napo pursuant to its lease. See "Napo Service Agreement" above. Since March 2014, we made the rent payments under Napo's lease. The lease was assigned to us in June 2014 and expired in June 2015.

Napo Beneficial Ownership

The following table sets forth information with respect to beneficial ownership of Napo common stock by the current members of 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, 2015.

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 the date of this prospectus 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	*
Karen S. Wright	—	—

* 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 September 2013, we issued a convertible promissory note (the "Note") for gross proceeds of $250,000 to the Bochnowski Family Trust. The Note bore interest at 8% per annum. The Note 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. In connection with the Notes, we issued to the noteholder warrants, which became exercisable to purchase an aggregate of 98,888 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.

On June 2, 2014, pursuant to a convertible note purchase agreement, we issued a convertible promissory note in the principal amount of $200,000 the Bochnowski Family Trust. This note accrued interest at 3% per annum and automatically matured on June 1, 2015. Accrued interest was paid in cash upon maturity. Upon the closing of our IPO, the outstanding principal amount automatically converted into 35,714 shares common stock at $5.60, as amended in March 2015.

In December 2014, pursuant to a convertible note and warrant purchase agreement dated December 23, 2014, we issued a convertible promissory note in the principal amount of $250,000 to the Bochnowski Family Trust. We later amended the terms of this note in February 2015. In connection with the December 2014 issuance of the note, we issued this accredited investor warrants to purchase that number of shares of common stock determined by dividing 50% of $250,000 principal amount by the exercise price. The exercise price is $5.60 per share (80% of the initial public offering price). 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 our initial public offering.

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 converted into two-thirds of a share of common stock upon the closing of our initial public offering in May 2015.

Investors' Rights Agreement

In February 2014, we entered into an investors' rights agreement with the holders of Series A preferred stock. This agreement provided 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 and certain additional covenants made by us. The investors' rights terminated upon the closing of our initial public offering in May 2015.

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 terminated upon the closing of our initial public offering in May 2015, and members previously elected to our board of directors pursuant to the agreement 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 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 terminated upon the closing of our initial public offering in May 2015.

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 or officer 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 or officer.

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 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 January 7, 2016 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 named executive officers; and
- all of our current 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 January 7, 2016 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 8,124,923 shares of common stock outstanding as of January 7, 2016. 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 January 7, 2016 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 shares of common stock to be outstanding after this offering, and includes the 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., 201 Mission Street, Suite 2375, San Francisco, California 94105.

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	32.8%	%
Entities affiliated with BVCF(2)	1,564,657	19.2%	%
Invesco Ltd.(3)	1,428,500	17.6%	%
Entities affiliated with Kingdon Capital Management, L.L.C.(4)	726,576	8.9%	%
Named Executive Officers and Directors			
James J. Bochnowski(5)	475,121	5.7%	%
Lisa A. Conte(6)	106,920	1.3%	
Jiahao Qiu(7)	2,221	—*	—*
Zhi Yang, Ph.D.(8)	1,564,657	19.2%	%
Folkert W. Kamphuis(9)	11,110	—*	—*
Steven R. King, Ph.D.(10)	62,370	—*	—*
Karen S. Wright	—	—*	—*
John A. Kallassy(11)	60,511	—*	—*
All executive officers and directors as a group (7 persons)(12)	2,222,399	26.16%	%

* 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, stock options to purchase 10,000 shares of common stock held by Dr. Yang, and warrants and options to purchase 43,997 shares of common stock held by Sichuan Biopharma. Kunlun Pharmaceuticals, Ltd. is wholly-owned by BVCF III, L.P. and BVCF III-A, L.P., Cayman Islands limited partnerships. BVCF III, L.P. and BVCF III-A, L.P. are managed by BioVeda Management, Ltd., a Cayman Islands company, or BVCF, and Sichuan Biopharma is an investment vehicle of BVCF. Dr. Yang is the sole shareholder of BVCF. BVCF may be deemed to beneficially own all shares held by Kunlun Pharmaceuticals, Ltd. and Sichuan Biopharma. BVCF's principal business address is Suite 2606, Tower 1, New Richport Center, 763 Mengzi Road, Huangpu District, Shanghai 200023, China.

(3) Represents 1,428,500 shares of common stock owned by Invesco Ltd.

(4) Represents 726,576 shares of common stock owned by Kingdon Capital Management, L.L.C.

(5) Includes (i) 327,576 shares of common stock, (ii) 26,336 shares of common stock issuable under stock options that are exercisable or will become exercisable within 60 days of January 7, 2016 and (iii) 121,209 shares of common stock issuable under warrants that are exercisable or will become exercisable within 60 days of January 7, 2016. All securities other than stock options are held by the Bochnowski Family Trust. Mr. Bochnowski is a co-trustee and beneficiary of such trust and shares voting and investment control over such shares with his spouse.

(6) Represents shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of January 7, 2016 and shares of restricted stock that have vested or will vest within 60 days of January 7, 2016.

(7) Represents shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of January 7, 2016 and shares of restricted stock that have vested or will vest within 60 days of January 7, 2016.

(8) Represents 1,564,657 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.

(9) Represents shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of January 7, 2016 and shares of restricted stock that have vested or will vest within 60 days of January 7, 2016.

(10) Represents shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of January 7, 2016 and shares of restricted stock that have vested or will vest within 60 days of January 7, 2016.

(11) Represents shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of January 7, 2016 and shares of restricted stock that have vested or will vest within 60 days of January 7, 2016. Mr. Kallassy is not currently an executive officer and therefore his beneficial ownership was omitted from the calculation of the beneficial ownership of all executive officers and directors as a group.

(12) See footnotes (5) - (10).

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 second amended and restated certificate of incorporation and amended and restated bylaws. This summary is not complete. For more detailed information, please see the second 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.

Our authorized capital stock consists 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.

Warrants to purchase an aggregate of 748,872 shares of common stock, if not exercised, will remain outstanding upon the closing of the offering.

Common Stock

Based on (i) 8,124,923 shares of common stock outstanding as of December 31, 2015 and (ii) no exercise of outstanding options or warrants, or issuance of shares upon vesting of RSUs, there will be shares of common stock outstanding upon the closing of this offering.

As of December 31, 2015, we had 14 record holders of common stock.

As of December 31, 2015, there were outstanding options to purchase 919,506 shares of common stock with a weighted-average exercise price of $3.87 per share and outstanding RSUs for 55,536 shares of common stock.

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

Our board of directors has 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, 2015, we had outstanding warrants to purchase an aggregate of 748,872 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; 178,569 of which are exercisable at a price of $5.60 per share and expire June 3, 2020; 58,035 of which are exercisable at a price of $5.60 per share and expire December 31, 2017; 111,605 of which are exercisable at a price of $5.60 per share and expire December 31, 2017; and 143,000 of which are exercisable at a price of $8.75 per share, and expire on May 13, 2020. These warrants, if not exercised, will remain outstanding following the closing of this offering.

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

Delaware Law

Certain provisions of Delaware law and our second amended and restated certificate of incorporation and amended and restated bylaws 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.

Second Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Our second amended and restated certificate of incorporation and amended and restated bylaws 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 second amended and restated certificate of incorporation, 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 second amended and restated certificate of incorporation and amended and restated bylaws 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 is listed on The NASDAQ Capital Market under the symbol "JAGX."

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, 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, 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 (in the case of an individual) or Form W-8BEN-E (in the case of an entity) 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. Non-U.S. holders 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 and the sole book-running manager in this offering. We have entered into an underwriting agreement dated 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 and commissions 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.	
Total	

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 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, less the underwriting discounts and commissions. 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 $.

Discounts and Commissions. 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 discounts and commissions	$	$	$
Proceeds, before expenses, to us	$	$	$

The underwriters propose to offer the shares offered by us to the public at the public offering price per share. 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 the over-allotment shares); (b) all filing fees associated with the review of this 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 upon the commencement of "blue sky" work by such counsel and an additional $5,000 at closing, if the offering is commenced on The NASDAQ Capital Market or the Over-the-Counter Bulletin Board, or an aggregate of $5,000 at closing if the offering is consummated on another national exchange; (f) all fees, expenses and disbursements relating to the registration, qualification or exemption of the shares of common stock under the securities laws of such foreign jurisdictions as the representatives may reasonably designate; (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 being 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 this offering in the national editions of the Wall Street Journal and 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 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 fees and expenses of the underwriters' legal counsel not to exceed $75,000; (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 this offering.

We estimate that the total expenses of the offering payable by us, excluding the total underwriting discounts and commissions, will be approximately $.

Lock-Up Agreements. We and our directors and officers 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 three 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.

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.

NASDAQ Capital Market Listing. Our common stock is listed on The NASDAQ Capital Market under the symbol "JAGX."

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. The representative of this offering was also the representative of our initial public offering.

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.

A managing director of the representative is a director of GPB.

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.

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.

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

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. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., 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.

We are subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements, and other information are 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. 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)

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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
Assets		
Current assets:		
Cash and cash equivalents	$ 185,367	$ 845,192
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
Property and equipment, net	—	872,523
Total assets	$ 289,261	$ 4,506,630
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
Notes payable	—	478,709
Warrant liability	—	601,889
Accrued expenses	79,250	1,317,991
Total current liabilities	724,114	3,561,964
License fee payable	—	1,875,000
Total liabilities	724,114	5,436,964
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
Additional paid-in capital	366,083	1,175,242
Accumulated deficit	(801,203)	(9,410,778)
Total stockholders' equity (deficit)	(434,853)	(8,235,248)
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

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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

1. Organization and Business (Continued)

that the 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.

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.

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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

2. Summary of Significant Accounting Policies (Continued)

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.

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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

2. Summary of Significant Accounting Policies (Continued)

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.

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.

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

2. Summary of Significant Accounting Policies (Continued)

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 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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

2. Summary of Significant Accounting Policies (Continued)

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, 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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

2. Summary of Significant Accounting Policies (Continued)

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

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.

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

3. Fair Value Measurements (Continued)

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, 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%

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

5. License Agreement (Continued)

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.

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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

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 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.

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

8. Debt and Warrants (Continued)

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 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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

8. Debt and Warrants (Continued)

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.

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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

8. Debt and Warrants (Continued)

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 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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

8. Debt and Warrants (Continued)

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.

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.

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

9. Redeemable Convertible Preferred Stock (Continued)

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.

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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

9. Redeemable Convertible Preferred Stock (Continued)

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).

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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

11. Stock-Based Awards (Continued)

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 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.

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

11. Stock-Based Awards (Continued)

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 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.

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

11. Stock-Based Awards (Continued)

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

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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

13. Net Loss Per Share Attributable to Common Stockholders (Continued)

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.

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.

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%

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

14. Income Taxes (Continued)

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 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

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

14. Income Taxes (Continued)

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.

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 an 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.

Jaguar Animal Health, Inc.

Notes to Financial Statements (Continued)

15. Subsequent Events (Continued)

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.

Jaguar Animal Health, Inc.

Balance Sheets

	December 31, 2014	September 30, 2015 (unaudited)
Assets		
Current assets:		
Cash and cash equivalents	$ 845,192	$ 10,377,483
Accounts receivable	—	8,698
Due from related party	—	4,209
Inventory	198,029	256,129
Deferred offering costs	2,480,049	—
Prepaid expenses	24,170	353,944
Deferred finance charges	86,667	102,226
Total current assets	3,634,107	11,102,689
Property and equipment, net	872,523	834,387
Restricted cash	—	4,500,000
Deferred finance charges	—	82,083
Other assets	—	122,163
Total assets	$ 4,506,630	$ 16,641,322
Liabilities, Convertible Preferred Stock and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable	$ 698,318	$ 276,767
License fee payable to related party	—	950,000
Due to related party	16,581	—
Deferred revenue	23,802	336,712
Convertible notes payable	424,674	150,000
Notes payable	478,709	—
Warrant liability	601,889	—
Accrued expenses	1,317,991	648,357
Long-term debt—current portion	—	1,454,030
Total current liabilities	3,561,964	3,815,866
Long-term debt, net of discount	—	4,457,994
License fee payable to parent	1,875,000	—
Deferred rent	—	1,660
Total liabilities	5,436,964	8,275,520
Commitments and Contingencies (Note 6)		
Series A redeemable convertible preferred stock; $0.0001 par value, 3,017,488 and 0 shares authorized at December 31, 2014 and September 30, 2015 (unaudited), respectively; 3,015,902 and 0 shares issued and outstanding at December 31, 2014 and September 30, 2015 (unaudited); (liquidation preference of $6,777,338 and $0 at December 31, 2014 and September 30, 2015 (unaudited)); no shares issued or outstanding pro forma at September 30, 2015 (unaudited)	7,304,914	—
Stockholders' Equity (Deficit)		
Common stock: $0.0001 par value, 15,000,000 and 50,000,000 shares authorized at December 31, 2014 and September 30, 2015 (unaudited); 2,874,330 and 8,124,923 shares issued and outstanding at December 31, 2014 and September 30, 2015 (unaudited), respectively; xx,xxx,xxx shares issued and outstanding pro forma at September 30, 2015 (unaudited)	288	812
Additional paid-in capital	1,175,242	29,936,497
Deficit accumulated during the development stage	(9,410,778)	(21,571,507)
Total stockholders' equity (deficit)	(8,235,248)	8,365,802
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$ 4,506,630	$ 16,641,322

The accompanying notes are an integral part of these financial statements

Jaguar Animal Health, Inc.

Statements of Comprehensive Loss

(Unaudited)

	Nine Months Ended September 30, 2014	Nine Months Ended September 30, 2015
Revenue	$ —	$ 203,195
Operating expenses:		
Cost of revenue	—	87,889
Research and development expense	3,275,991	4,414,162
Sales and marketing expense	—	519,275
General and administrative expense	3,196,120	3,784,272
Total operating expenses	6,472,111	8,805,598
Loss from operations	(6,472,111)	(8,602,403)
Interest expense, net	(168,384)	(3,033,238)
Other income	—	(23,471)
Change in fair value of warrants	—	(501,617)
Net loss and comprehensive loss	$ (6,640,495)	$ (12,160,729)
Accretion of redeemable convertible preferred stock	(465,841)	(346,374)
Net loss attributable to common stockholders	$ (7,106,336)	$ (12,507,103)
Net loss per share attributable to common stockholders, basic and diluted	$ (2.49)	$ (2.28)
Weighted-average common shares outstanding, basic and diluted	2,848,467	5,488,655

The accompanying notes are an integral part of these financial statements

JAGUAR ANIMAL HEALTH, INC.

CONDENSED STATEMENT OF CHANGES IN COMMON STOCK, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)

(Unaudited)

	Series A Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount			
Balances December 31, 2013	**—**	**$ —**	**2,666,666**	**$ 267**	**$ 366,083**	**$ (801,203)**	**$ (434,853)**
Stock-based compensation	—	—	—	—	164,156	—	164,156
Conversion of notes payable	—	—	207,664	21	524,979	—	525,000
Series A issuance	3,015,902	6,658,241	—	—	—	—	—
Beneficial conversion feature on notes payable	—	—	—	—	614,557	—	614,557
Warrant, line of credit	—	—	—	—	114,300	—	114,300
Warrant, transfer agreement	—	—	—	—	37,840	—	37,840
Deemed dividends on Series A	—	610,889	—	—	(610,889)	—	(610,889)
Accretion of issuance costs	—	35,784	—	—	(35,784)	—	(35,784)
Net and comprehensive loss	—	—	—	—	—	(8,609,575)	(8,609,575)
Balances December 31, 2014	**3,015,902**	**$ 7,304,914**	**2,874,330**	**$ 288**	**$ 1,175,242**	**$ (9,410,778)**	**$ (8,235,248)**
Issuance of common stock in initial public offering, net of discounts and commissions of $1,209,802 and offering costs of $2,897,825	—	—	2,860,000	286	15,912,374	—	15,912,660
Conversion of preferred stock into common stock upon initial public offering	(3,015,902)	(7,651,288)	2,010,596	201	7,651,087	—	7,651,288
Conversion of preferred stock warrant liability into additional paid-in capital	—	—	—	—	1,150,985	—	1,150,985
Conversion of convertible notes into common stock upon initial public offering	—	—	374,997	37	2,099,963	—	2,100,000
Stock-based compensation	—	—	—	—	828,049	—	828,049
Beneficial conversion feature on notes payable	—	—	—	—	1,202,521	—	1,202,521
Deemed dividends on Series A	—	263,060	—	—	(263,060)	—	(263,060)
Accretion of issuance costs	—	83,314	—	—	(83,314)	—	(83,314)
Napo license fee abatement	—	—	—	—	250,000	—	250,000
Issuance of common stock upon exercise of stock options	—	—	5,000	—	12,650	—	12,650
Net and comprehensive loss	—	—	—	—	—	(12,160,729)	(12,160,729)
Balances September 30, 2015	**—**	**$ —**	**8,124,923**	**$ 812**	**$29,936,497**	**$(21,571,507)**	**$ 8,365,802**

The accompanying notes are an integral part of these financial statements.

JAGUAR ANIMAL HEALTH, INC.

CONDENSED STATEMENTS OF CASH FLOWS

(Unaudited)

	Nine Months Ended September 30,	
	2014	2015
Cash Flows from Operating Activities		
Net loss	$ (6,640,495)	$ (12,160,729)
Adjustments to reconcile net loss to net cash used in operating activities:		
(Gain)/loss on disposal of fixed assets	—	34,549
Materials cost in connection with license activity	1,082,626	6,287
Warrants issued in connection with transfer agreement	37,840	—
Warrants issued in connection with line of credit	114,300	—
Stock-based compensation	105,610	828,049
Amortization of beneficial conversion feature	36,981	—
Accretion of debt discount	5,514	2,493,074
Revaluation of warrant liability	—	501,617
Amortization of deferred finance charge	3,894	99,882
Changes in assets and liabilities		
Accounts receivable	—	(8,698)
Inventory	—	(58,100)
Prepaid license fee	100,000	—
Prepaid expenses	(66,743)	(329,774)
Deferred finance charges	—	(197,524)
Other long-term assets	—	(122,163)
Due to/from parent	(44,622)	(20,790)
Deferred revenue	—	312,910
Deferred rent	—	1,660
License fee payable	—	(675,000)
Accounts payable	617,057	(421,551)
Accrued expenses	1,028,781	(669,634)
Total Cash Used in Operations	(3,619,257)	(10,385,935)
Cash Flows from Investing Activities		
Purchase of equipment	(55,149)	(23,300)
Sale of equipment	—	20,600
Change in restricted cash	—	(4,500,000)
Total Cash used in Investing Activities	(55,149)	(4,502,700)
Cash Flows from Financing Activities		
Proceeds from issuance of long-term debt	—	5,865,567
Proceeds from issuance of redeemable convertible preferred stock, net	6,658,241	—
Repayment of convertible notes payable	—	(100,000)
Repayment of notes payable	—	(1,000,000)
Proceeds from issuance of redeemable convertible notes payable, net	450,000	1,250,000
Proceeds from issuance of common stock in initial public offering, net	—	18,810,484
Deferred offering costs	(1,954,007)	(417,775)
Proceeds from exercise of common stock options	—	12,650
Total Cash Provided by Financing Activities	5,154,234	24,420,926
Net increase in cash and cash equivalents	1,479,828	9,532,291
Cash and cash equivalents, beginning of period	185,367	845,192
Cash and cash equivalents, end of period	$ 1,665,195	$ 10,377,483
Supplemental Schedule of Non-Cash Financing and Investing Activities		
Interest paid on long-term debt	$	$ 23,100
Offering costs not paid during the nine months	$ —	$ 1,401,253
Equipment received in connection with license agreement	$ 817,374	$ —
Note payable converted into common stock	$ 525,000	$ —
Warrants issued in connection with convertible notes payable	$ —	$ 47,479
Conversion of convertible preferred stock to common stock	$ —	$ 7,651,288
Conversion preferred stock warrant liability to common stock warrants	$ —	$ 1,150,985
Conversion of convertible notes to common stock	$ —	$ 2,100,000
Accretion of redeemable convertible preferred stock	$ 465,841	$ 346,374
Abatement of license fee payable to Napo	$ —	$ 250,000

The accompanying notes are an integral part of these financial statements.

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED 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") until May 13, 2015, was formed to develop and commercialize gastrointestinal products for companion and production animals. The Company is an animal health company 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 Jaguar with the services of certain Napo employees for research and development and the general administrative functions of Jaguar. 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. See Notes 4 and 5 for the Service Agreement and license agreement details, respectively.

Reverse Stock Split

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.

Initial Public Offering

In May 2015, the Company completed an initial public offering ("IPO") of its common stock. In connection with its IPO, the Company issued 2,860,000 shares of its common stock at a price to the public of $7.00 per share. The Company's shares of common stock began trading on the NASDAQ Capital Market on May 13, 2015. As a result of the IPO, the Company received approximately $15.9 million in net proceeds, after deducting underwriting discounts and commissions of $1.2 million and offering expenses of $3.3 million. At the closing of the IPO, 3,015,902 shares of outstanding convertible preferred stock were automatically converted into 2,010,596 shares of common stock. Following the IPO, there were no shares of preferred stock outstanding. In connection with the IPO, the Company amended its Amended and Restated Certificate of Incorporation to change the authorized capital stock to 50,000,000 shares designated as common stock and 10,000,000 shares designated as preferred stock, all with a par value of $0.0001 per share.

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

1. Organization and Business (Continued)

Liquidity

The accompanying condensed 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 $21,571,507 as of September 30, 2015. 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 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 condensed 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 accompanying unaudited condensed financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC") for Quarterly Reports on Form 10-Q and do not contain all of the information and footnotes required by U.S. generally accepted accounting principles ("U.S. GAAP") for complete financial statements. The accompanying unaudited condensed financial statements and notes thereto should be read in conjunction with the audited financial statements and notes thereto included in the prospectus that forms part of the Company's Registration Statement on Form S-1 (File No. 333-198383), which prospectus was filed with the SEC pursuant to Rule 424 on May 14, 2015. In the opinion of management, the accompanying unaudited Condensed Financial Statements reflect all adjustments, which include only normal recurring adjustments necessary to present fairly the Company's interim financial information. The results for the nine months ended September 30, 2015 are not necessarily indicative of the results to be expected for the year ending December 31, 2015 or for any other period. The balance sheet as of December 31, 2014 has been derived from the audited financial statements as of that date but it does not include all of the information and notes required by U.S. GAAP.

The Company has evaluated events and transactions subsequent to the balance sheet date and has disclosed all events or transactions that occurred subsequent to the balance sheet date but prior to filing this Quarterly Report on Form 10-Q that would require recognition or disclosure in the unaudited Condensed Financial Statements.

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

2. Summary of Significant Accounting Policies (Continued)

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.

Revenue Recognition

Sales to distributors are made under agreements that may provide distributor price adjustments and rights of return under certain circumstances. Until the Company develops sufficient sales history and pipeline visibility, revenue and costs of distributor sales will be deferred until products are sold by the distributor to the distributor's customers. Revenue recognition depends on notification either directly from the distributor that product has been sold to the distributor's customer, when the Company has access to the data. The Company will maintain system controls to verify that the reported distributor and third party data is accurate. Deferred revenue on shipments to distributors will reflect the estimated effects of distributor price adjustments, if any, and the estimated amount of gross margin expected to be realized when the distributor sells through product purchased from the Company. Accounts receivable from distributors will be recognized and included in deferred revenue when shipped to the distributor. Inventory will be relieved and revenue recognized, typically upon shipment by the distributor to their customer. The Company had no revenue for the nine months ended September 30, 2014 and $203,195 for the nine months ended September 30, 2015.

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

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

3. Fair Value Measurements (Continued)

- 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 September 30, 2015 and December 31, 2014 and indicates the fair value hierarchy of the valuation:

	Level 1	Level 2	Level 3	Total
As of December 31, 2014 Warrant liability	$ —	$ —	$ 601,889	$ 601,889
As of September 30, 2015 Warrant liability	$ —	$ —	$ —	$ —

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	Conversion into Additional Paid-in Capital	Ending Fair Value of Level 3 Liability
For the nine months ended September 30, 2015	$ 601,889	$ 47,479	$ 501,617	(1,150,985)	$ —

The change in the fair value of the level 3 warrant liability is reflected in the statement of operations and comprehensive loss for the nine months ended September 30, 2015. The liability was converted into additional paid-in capital upon the Company's initial public offering.

There were no other assets or liabilities measured at fair value on a recurring basis at September 30, 2015.

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. 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 $114,858 for the nine months ended September 30, 2014.

Research and development expense recognized under the Service Agreement $28,764 for the nine months ended September 30, 2014.

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

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).

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, 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 aggregating $3,150,000 may also be due to Napo 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 the *Croton lechleri* tree, up to $30,000,000 and then, a royalty of 10% on annual net sales of $30,000,000 or more. Additionally, if any other products are developed, 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, because an IPO of at least $10,000,000 was consummated prior to December 31, 2015, the royalty was reduced to 2% of annual net sales of its prescription products derived from *Croton lechleri* and 1% of net sales of its nonprescription products derived from *Croton lechleri* and no milestone payment will be due and no royalties will be owed on any additional products developed. As of September 30, 2015, $2,214 is the amount of royalties due Napo.

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 operations and comprehensive loss during the year ended December 31, 2014. Equipment of $817,374 related to the License is included on the balance sheet at September 30, 2015 at the cost paid by Napo, which approximates fair value. As of September 30, 2015, 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. In 2015, payments totalling $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

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

5. License Agreement (Continued)

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. Given that Napo is a significant shareholder of the Company, the abatement of the license fee amount has been recorded as a capital contribution in the accompanying condensed financial statements.

6. Accrued Expenses

Accrued expenses at September 30, 2015 and December 31, 2014 consist of the following:

	December 31, 2014	September 30, 2015
Accrued legal costs	$ 738,600	$ —
Accrued printing costs	275,000	—
Accrued interest	29,292	120,962
Accrued vacation	140,408	173,473
Accrued compensation and related expense	—	137,630
Other	134,691	216,292
	$ 1,317,991	$ 648,357

7. Commitments and Contingencies

Since March 1, 2014, the date the Service Agreement terminated (Note 4), 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 of 2014.

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. The first €150,000 of the bonus fee payable was paid in May 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, amended to $6.30 in March 2015. (Note 8)

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

7. Commitments and Contingencies (Continued)

Effective February 12, 2015, March 25, 2015 and July 15, 2015 the Company entered into amendments delaying payments to the Manufacturer as follows: i) the €500,000 start-up fee was due by the end of April 2015 and has been paid during the nine months ended September 30, 2015, (ii) related to the technology transfer, of the remaining €310,000, €215,000 was due April 2015 and €95,000 was due June 30, 2015, both of which were paid during the nine months ended September 30, 2015, (iii) related to the design of a portion of the Manufacturer's facility, the payment has increased to €170,000, €150,000 of which was due at the end of April 2015 and €20,000 was due on June 30, 2015, both of which have been paid during the nine months ended September 30, 2015 (iv) the fees linked to the deliverables are now due €250,000 on December 31, 2015 and €250,000 on March 31, 2016, 2015, (v) the bonus fee payable of €300,000, €150,000 was due at the end of April 2015 and has been paid during the nine months ended September 30, 2015 and €150,000 due at December 31, 2015. In May 2015, the Company paid the start-up fee of €500,000 and the technology transfer fee of €215,000. In accordance with the terms of the Memorandum of Understanding, the Manufacturer will supply 400Kg of SB300 at no cost in anticipation of the future deduction by December 2015.

In September 2015, the Company entered into a four year manufacture and supply agreement (the "Supply Agreement") with a contract manufacturer in India for the manufacture and supply of active pharmaceutical ingredient ("API"). For each calendar year, the Company and the manufacturer will agree to a minimum annual quantity that the Company will purchase. In connection with the Supply Agreement, the Company paid $49,090 in September 2015 as an advance payment for the API, which has been included in prepaid expenses at September 30, 2015.

In accordance with a sublease assignment, effective in June 19, 2015, the Company leased 6,008 square feet of office space. The term of the sublease began upon the delivery of the premises, which was July 1, 2015, and will expire on August 31, 2018. The base rent is $29,539 with $500 annual increases. In addition, the Company will be responsible for certain costs and charges specified in the sublease, including operating expenses and taxes. Future minimum lease payments will total $1,054,909.

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

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

8. Debt and Warrants (Continued)

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 (as adjusted for the 1-for-1.5 reverse stock split approved in October 2014) 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.

In February 2014, in connection with the first equity round of financing and issuance of the Series A convertible preferred stock, the noteholders exercised their option to convert their Notes into 207,664 shares of common stock and accrued interest was paid in cash to the noteholders. The accreted interest expense related to the discount on the Notes was $1,443 for the period from January 1, 2014 to the conversion date of the Notes. Upon conversion, the entire remaining debt discount of $4,071 was recorded as interest expense.

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 a board member to which Series A preferred stock was sold. These notes accrued interest at 3% per annum and automatically were to mature on June 1, 2015. Accrued interest was to be paid in cash upon maturity. Upon the closing of the IPO, the outstanding principal amount automatically converted into 53,571 shares common stock at $5.60, as amended in March 2015. Upon issuance, the Company analyzed the beneficial nature of the conversion terms and determined that a beneficial conversion feature ("BCF") existed because the effective conversion price on issuance of the notes was less than the fair value at the time of the issuance. The Company calculated the value of the BCF using the intrinsic method and recorded a BCF of $75,000 as a discount to the notes payable and to additional paid-in capital. For the nine months ended September 30, 2015 and 2014, the Company amortized $31,250 and $6,250, respectively, 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 accrued interest at 3% per annum and automatically was to mature on June 1, 2015. Accrued interest was to be paid in cash upon maturity. Upon the closing of the IPO, the outstanding principal amount automatically converted into 26,785 shares of common stock at $5.60, as amended in March 2015. Upon issuance, the Company analyzed the beneficial nature of the conversion terms and determined that a BCF existed because the effective conversion price was less than the fair value at the time of the issuance. The Company calculated the value of the BCF using the intrinsic method and recorded a BCF of $37,500 as a discount to the notes payable and to additional paid-in capital. For the nine months ended September 30, 2015, the Company amortized $17,857 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, amended to $6.30 in March 2015, for a period of five years. The fair value of

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

8. Debt and Warrants (Continued)

the warrants, $37,840, was recorded as research and development expense and additional paid-in capital in June 2014. The warrants were originally valued using the Black-Scholes model with the following assumptions: stock price of $4.83, exercise price of $4.35, term of five years, volatility of 49%, dividend yield of 0%, and risk-free interest rate of 1.64%.

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. 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, amended to $5.60 in March 2015, which expires in August 2016. The fair value of the warrants, $114,300, was recorded as interest expense and additional paid-in capital in August 2014. The warrants were originally valued using the Black-Scholes model with the following assumptions: stock price of $8.00, exercise price of $6.40, term of two years, volatility of 52%, dividend yield of 0%, and risk-free interest rate of 0.52%. The line of credit expired on March 31, 2015 and there have been no drawdowns under the facility.

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 provided 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 was recorded as interest expense using the effective interest method, over the six month term of the Bridge. The Bridge became payable upon the IPO. The Bridge was paid in May 2015, including interest thereon in an amount of $321,600. 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 of 80% of the IPO price, amended to $5.60 in March 2015. The fair value of the warrants, $505,348, was originally recorded as a debt discount and liability at December 3, 2014. The warrants were originally valued using the Black-Scholes model with the following assumptions: stock price of $5.01, exercise price of $5.23, term of five years, volatility of 63%, dividend yield of 0%, and risk-free interest rate of 1.61%. Based on the circumstances, the value derived using the Black-Scholes model approximated that which would be obtained using a lattice model. The debt discount was recorded as interest expense over the six month term of the Bridge. Of the aggregate debt discount of $605,348 (warrants and original $100,000 discount), $521,291 was recorded as interest expense during the nine months ended September 30, 2015. 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 nine months ended September, 2015, the remaining $86,667 of these deferred financing charges was recorded as interest expense.

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 accrued interest at 12% per annum and became payable within thirty days following the IPO. Upon consummation of the Company's IPO, the noteholders converted the notes into 116,070 shares of common stock at a conversion price equal to 80% of the IPO price, amended to $5.60 in March 2015. In connection with these notes, the Company also issued the lenders a fully vested warrant to purchase shares of the Company's common stock at an exercise price equal to 80% of the IPO price, amended to $5.60 in March 2015. These warrants entitle the noteholders to purchase

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

8. Debt and Warrants (Continued)

58,035 shares of common stock. The fair value of the warrants, $147,943, was recorded as a debt discount and liability at December 23, 2014. The Company amortized the remaining $141,890 of this discount during the nine months ended September 30, 2015. The warrants were originally 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 was 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 analyzed the beneficial nature of the conversion terms and determined that a BCF existed because the effective conversion price was less than the fair value at the time of the issuance. 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 nine months ended September 30, 2015, the Company amortized the remaining $484,326 of the BCF which has also been recorded as interest expense.

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. Principal and interest of $103,912 was paid in May 2015 for $100,000 of these notes.

In March 2015, the Company entered into a non-binding letter of intent with Dechra Pharmaceuticals PLC ("Dechra"). In connection therewith, Dechra paid the Company $1,000,000. At March 31, 2015, the Company had recorded this amount as a loan advance on the balance sheet. In April 2015, Dechra purchased $1,000,000 of convertible promissory notes from the Company, the terms of which provided that such notes were to be converted into shares of the Company's common stock upon the closing of an IPO at a conversion price of $5.60 per share. In connection with the purchase of the notes, the Company issued Dechra a warrant to purchase 89,285 shares at $5.60 per share, which expires December 31, 2017. The notes accrued simple interest of 12% per annum and, upon consummation of the Company's IPO in May 2015, converted into 178,571 shares of the Company's common stock. The Company analyzed the beneficial nature of the conversion terms and determined that a BCF existed because the effective conversion price was less than the fair value at the time of the issuance. The Company calculated the value of the BCF using the intrinsic method. A BCF of for the full face value was recorded as a discount to the notes payable and to additional paid-in capital. For the nine months ended June 30, 2015, the Company amortized the entire BCF of $1,000,000 which has also been recorded as interest expense.

In May 2015, in connection with our initial public offering, the Company issued warrants to purchase up to a total of 143,000 shares of our common stock to Aegis Capital Corp., as the representative of the several underwriters of the IPO, and its designees at an exercise price of $8.75 per share. These warrants are exercisable for a four-year period commencing May 13, 2016. These warrants were valued at $400,000 and were netted against IPO proceeds as offering costs.

In August 2015, the Company entered into a loan and security agreement with a lender for up to $8,000,000, which provided for an initial loan commitment of $6,000,000. The loan agreement requires the Company to maintain $4,500,000 of the proceeds in cash, which amount may be reduced or eliminated on the achievement of certain milestones. An additional $2,000,000 is available contingent on the achievement of certain further milestones. The agreement has a term of three years, with

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

8. Debt and Warrants (Continued)

interest only payments through February 29, 2016. Thereafter, principal and interest payments will be made with an interest rate of 9.9%. Additionally, there will be a balloon interest payment of $560,000 on August 1, 2018. This amount is being recognized over the term of the loan agreement and the effective interest rate, considering the balloon payment, is 15.0%. Proceeds to the Company were net of a $134,433 debt discount under the terms of the loan agreement. This debt discount is being recorded as interest expense, using the interest method, over the term of the loan agreement. Under the agreement, the Company is entitled to prepay principal and accrued interest upon five days prior notice to the lender. In the event of prepayment, the Company is obligated to pay a prepayment charge. If such prepayment is made during any of the first twelve months of the loan agreement, the prepayment charge will be (a) during such time as the Company is required to maintain a minimum cash balance, 2% of the minimum cash balance amount plus 3% of the difference between the amount being prepaid and the minimum cash balance, and (b) after such time as the Company is no longer required to maintain a minimum cash balance, 3% of the amount being prepaid. If such prepayment is made during any time after the first twelve months of the loan agreement, 1% of the amount being prepaid.

9. Common Stock

On May 18, 2015, the Company filed an amended and restated certificate of incorporation was amended and restated authorizing the Company to issue 50,000,000 of common stock $0.0001 par value.

10. 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 was 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. During the nine months ended September 30, 2015, 147,500 options were granted, 90,000 of which were granted to members of the Company's board of directors, 25,000 to an outside consultant and 32,500 to employees. Following the effective date of the IPO, any stock awards granted by the Company will be under the 2014 Plan. The Company has 185,833 shares available for grant at September 30, 2015.

JAGUAR ANIMAL HEALTH, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (Continued)

10. Stock-Based Awards (Continued)

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 of $429,468 as research and development expense, $44,462 as selling and marketing expense and $354,119 as general and administrative expense for the nine months ended September 30, 2015.

11. Related Party Transactions

The Company was a majority-owned subsidiary of Napo until its IPO. The Company had total outstanding receivables from Napo in the amount of $4,209 as of September 30, 2015. The Company had outstanding liabilities to Napo in the amount of $16,581 as of December 31, 2014. Additionally, Lisa A. Conte, Chief Executive Officer of the Company, is also the interim Chief Executive Officer of Napo Pharmaceuticals, Inc.

12. 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. 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 outstanding shares of common stock equivalents have been excluded from diluted net loss per common share for the nine months ended September 30, 2015 and 2014 because their inclusion would be anti-dilutive:

	Nine Months Ended September 30,	
	2014	2015
Shares of common stock issuable upon conversion of preferred stock	2,010,596	—
Shares of common stock subject to outstanding options and restricted stock units	832,407	905,302
Warrants to purchase common stock	257,663	605,872
Total shares of common stock equivalents	3,100,666	1,511,174

13. Subsequent Events

The Company completed an evaluation of the impact of subsequent events through November 13, 2015, the date these financial statements were issued.

In October 2015, the Company entered into a formulation development and manufacturing contract with a manufacturer, whereby the manufacturer will provide enteric-coated tablets to the Company for use in animals. The total amount committed to be paid by the Company during 2015 and 2016 under this contract is estimated to be approximately $850,000.

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Shares
Common Stock

PROSPECTUS

Aegis Capital Corp

, 2016

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 and the FINRA filing fee the amounts set forth below are estimates.

	Amount to be Paid
SEC registration fee	$ 1,273.86
FINRA filing fee	2,397.50
Accounting fees and expenses	*
Legal fees and expenses	*
Printing and related expenses	*
Transfer agent and registrar fees	*
Miscellaneous	*
Total	$

* To be filed by amendment.

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. At the closing of our initial public offering in May 2015, such shares of Series A preferred stock were automatically converted into 1,483,326 shares of common stock.

(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. At the closing of our initial public offering in May 2015, such shares of Series A preferred stock were automatically converted into 390,211 shares of common stock.

(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. At the closing of our initial public offering in May 2015, such shares of Series A preferred stock were automatically converted into 137,059 shares of common stock.

(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. At the closing of our initial public offering in May 2015, the outstanding principal amount automatically converted into 53,571 shares common stock at $5.60.

(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. At the closing of our initial public offering in May 2015, the outstanding principal amount automatically converted into 26,785 shares of common stock at $5.60.

(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. 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.

(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. At the closing of our initial public offering in May 2015, the noteholders converted the notes into 116,070 shares of common stock at a conversion price equal to 80% of the initial public offering price per share, amended to $5.60 in March 2015. 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.

(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. At the closing of our initial public offering in May 2015, the noteholders converted the notes into 44,642 shares of common stock at $5.60. 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.

(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. At the closing of our initial public offering in May 2015, the noteholder converted the notes into 178,571 shares of common stock at $5.60. 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	Second Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K (No. 001-36714) filed with the Securities and Exchange Commission on May 18, 2015).
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K (No. 001-36714) filed with the Securities and Exchange Commission on May 18, 2015).
4.1	Specimen Common Stock Certificate of Jaguar Animal Health, Inc. (incorporated by reference to Exhibit 4.1 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on October 10, 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 (incorporated by reference to Exhibit 4.1 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.2#	Jaguar Animal Health, Inc. 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.5 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on October 31, 2014).

Exhibit No.	Description
10.3#	Form of Notice of Grant of Stock Option and Stock Option Agreement under the 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.6 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.4#	Form of Notice of Grant of Restricted Stock and Restricted Stock Agreement under the 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.7 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.5#	Form of Notice of Grant of Restricted Stock Units and Restricted Stock Unit Agreement under the 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.8 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.6#	Offer Letter by and between Jaguar Animal Health, Inc. and Lisa A. Conte, dated March 1, 2014 (incorporated by reference to Exhibit 10.9 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.7#	Offer Letter by and between Jaguar Animal Health, Inc. and Steven R. King, Ph.D., dated February 28, 2014 (incorporated by reference to Exhibit 10.11 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.8	Amended and Restated License Agreement by and between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated August 6, 2014 (incorporated by reference to Exhibit 10.13 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.9	Employee Leasing and Overhead Allocation Agreement by and between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated July 1, 2013 (incorporated by reference to Exhibit 10.14 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.10	Assignment of Sublease and Landlord Consent by and between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated June 1, 2014 (incorporated by reference to Exhibit 10.15 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.11	Form of Common Stock Warrant, which expires February 5, 2019 (incorporated by reference to Exhibit 10.16 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.12	Form of Common Stock Warrant issued to Indena S.p.A., which expires June 26, 2019 (incorporated by reference to Exhibit 10.17 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.13	Form of Common Stock Warrant issued to Joshua Mailman, which expires August 26, 2016 (incorporated by reference to Exhibit 10.21 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on September 9, 2014).

Exhibit No.	Description
10.14#	Offer Letter by and between Jaguar Animal Health, Inc. and John A. Kallassy, dated as of September 19, 2014 (incorporated by reference to Exhibit 10.22 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on October 10, 2014).
10.15	Non-Disturbance Letter Agreement by and between Napo Pharmaceuticals, Inc. and Nantucket Investments Limited, as Administrative Agent and Collateral Agent, dated October 10, 2014 (incorporated by reference to Exhibit 10.23 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on October 10, 2014).
10.16	Form of Warrant to Purchase Common Stock issued to GPB Life Science Holdings LLC and 31 Group, LLC, which expires October 30, 2019 (incorporated by reference to Exhibit 10.25 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on October 31, 2014).
10.17	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 (incorporated by reference to Exhibit 10.27 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on April 17, 2015).
10.18	Amendment No. 1 to Amended and Restated License Agreement between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated as of January 27, 2015 (incorporated by reference to Exhibit 10.28 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on March 20, 2015).
10.19#	Offer Letter by and between Jaguar Animal Health, Inc. and Michael Hauser, D.V.M., dated as of March 3, 2015 (incorporated by reference to Exhibit 10.32 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on March 20, 2015).
10.20	Form of Representative's Warrant (incorporated by reference to Exhibit 10.33 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on April 17, 2015).
10.21	Form of Warrant and Note Exercise Amendment pursuant to Convertible Note and Warrant Purchase Agreement dated December 23, 2014 (incorporated by reference to Exhibit 10.35 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on April 17, 2015).
10.22	Convertible Note and Warrant Purchase Agreement dated March 20, 2015 by and between Jaguar Animal Health, Inc., and Dechra Pharmaceuticals PLC (incorporated by reference to Exhibit 10.37 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on April 17, 2015).
10.23	Common Stock Warrant issued pursuant to the Convertible Note and Warrant Purchase Agreement dated March 20, 2015, which expires December 31, 2017 (incorporated by reference to Exhibit 10.39 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on April 17, 2015).
10.24	Form of Warrant Exercise Amendment pursuant to Exchange Warrant to Purchase Common Stock dated December 3, 2014 (incorporated by reference to Exhibit 10.40 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on April 17, 2015).

Exhibit No.	Description
10.25	Form of Amended and Restated Exchange Warrant to Purchase Common Stock (incorporated by reference to Exhibit 10.41 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on April 17, 2015).
10.26	Sublease Agreement by and between SeeChange Health Management LLC and Jaguar Animal Health, Inc., dated June 23, 2015 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (No. 001-36714) filed with the Securities and Exchange Commission on June 23, 2015).
10.27	Consent to Sublease by and among CA-Mission Street Limited Partnership, SeeChange Health Management LLC and Jaguar Animal Health, Inc., dated June 19, 2015 (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (No. 001-36714) filed with the Securities and Exchange Commission on June 23, 2015).
10.28	Loan and Security Agreement between Jaguar Animal Health, Inc., Qualified Subsidiaries thereof, the several banks and other financial institutions or entities from time to time parties thereto as lenders and Hercules Technology Growth Capital, Inc., dated as of August 18, 2015 (incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K (No. 001-36714) filed with the Securities and Exchange Commission on August 20, 2015).
10.29†	Manufacture and Supply Agreement between Jaguar Animal Health, Inc. and Glenmark Pharmaceuticals Ltd., dated September 22, 2015 (incorporated herein by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q (No. 001-36714) filed with the Securities and Exchange Commission on November 13, 2015).
10.30*	Formulation Development and Manufacturing Agreement between Jaguar Animal Health, Inc. and Patheon Pharmaceuticals Inc., dated October 8, 2015.
10.31#	Offer Letter by and between Jaguar Animal Health, Inc., and Karen Wright, dated as of October 11, 2015 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
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 the signature page hereto).

Exhibit No.	Description
101**	The following materials formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Balance Sheets as of September 30, 2015 (unaudited) and December 31, 2014, (ii) Condensed Statements of Operations and Comprehensive Loss for the Three and Nine Month Periods ended September 30, 2015 and 2014, (iii) Condensed Statement of Changes in Common Stock, Convertible Preferred Stock and Stockholders' (Deficit) for the period from December 31, 2013 through September 30, 2015, (iv) Condensed Statements of Cash Flows for the Nine Months Ended September 30, 2015 and 2014, (v) Notes to the Condensed Financial Statements, (vi) Condensed Balance Sheets as of December 31, 2013 and 2014 and Pro Forma as of December 31, 2014, (vii) Statements of Comprehensive Loss for the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014, (viii) Statement of Changes in Common Stock, Convertible Preferred Stock and Stockholders' (Deficit) for the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014, (ix) Statements of Cash Flows for the period from June 6, 2013 (inception) through December 31, 2013 and the year ended December 31, 2014 and (x) Notes to the Consolidated Financial Statements.

* Filed herewith.

** To be filed by amendment.

† Confidential treatment granted as to portions of the exhibit. Confidential materials omitted and filed separately with the Securities and Exchange Commission.

Management contract or compensatory plan or arrangement.

(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 Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of San Francisco, State of California, on January 7, 2016.

JAGUAR ANIMAL HEALTH, INC.

By: /s/ LISA A. CONTE

Name: Lisa A. Conte
Title: *Chief Executive Officer and President*

POWER OF ATTORNEY

We, the undersigned officers and Directors of Jaguar Animal Health, Inc., a Delaware corporation, hereby severally constitute and appoint Lisa A. Conte and/or Karen Wright, our true and lawful attorney-in-fact and agents, with full power of substitution and resubstitution for her or him and in her or his name, place and stead, and in any and all capacities, to sign for us and in our names in the capacities indicated below any and all amendments (including post-effective amendments) to this registration statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or her or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this 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)	January 7, 2016
/s/ KAREN WRIGHT Karen Wright	Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	January 7, 2016
/s/ JAMES J. BOCHNOWSKI James J. Bochnowski	Chairman of the Board	January 7, 2016
/s/ JIAHAO QIU Jiahao Qiu	Director	January 7, 2016
/s/ ZHI YANG, PH.D. Zhi Yang, Ph.D.	Director	January 7, 2016
/s/ FOLKERT KAMPHUIS Folkert Kamphuis	Director	January 7, 2016

Exhibit Index

Exhibit No.	Description
1.1**	Form of Underwriting Agreement.
3.1	Second Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K (No. 001-36714) filed with the Securities and Exchange Commission on May 18, 2015).
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K (No. 001-36714) filed with the Securities and Exchange Commission on May 18, 2015).
4.1	Specimen Common Stock Certificate of Jaguar Animal Health, Inc. (incorporated by reference to Exhibit 4.1 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on October 10, 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 (incorporated by reference to Exhibit 4.1 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.2#	Jaguar Animal Health, Inc. 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.5 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on October 31, 2014).
10.3#	Form of Notice of Grant of Stock Option and Stock Option Agreement under the 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.6 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.4#	Form of Notice of Grant of Restricted Stock and Restricted Stock Agreement under the 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.7 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.5#	Form of Notice of Grant of Restricted Stock Units and Restricted Stock Unit Agreement under the 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.8 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.6#	Offer Letter by and between Jaguar Animal Health, Inc. and Lisa A. Conte, dated March 1, 2014 (incorporated by reference to Exhibit 10.9 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.7#	Offer Letter by and between Jaguar Animal Health, Inc. and Steven R. King, Ph.D., dated February 28, 2014 (incorporated by reference to Exhibit 10.11 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.8	Amended and Restated License Agreement by and between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated August 6, 2014 (incorporated by reference to Exhibit 10.13 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).

Exhibit No.	Description
10.9	Employee Leasing and Overhead Allocation Agreement by and between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated July 1, 2013 (incorporated by reference to Exhibit 10.14 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.10	Assignment of Sublease and Landlord Consent by and between Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc., dated June 1, 2014 (incorporated by reference to Exhibit 10.15 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.11	Form of Common Stock Warrant, which expires February 5, 2019 (incorporated by reference to Exhibit 10.16 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.12	Form of Common Stock Warrant issued to Indena S.p.A., which expires June 26, 2019 (incorporated by reference to Exhibit 10.17 to the Registration Statement on Form S-1 (No. 333-198383) filed with the Securities and Exchange Commission on August 27, 2014).
10.13	Form of Common Stock Warrant issued to Joshua Mailman, which expires August 26, 2016 (incorporated by reference to Exhibit 10.21 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on September 9, 2014).
10.14#	Offer Letter by and between Jaguar Animal Health, Inc. and John A. Kallassy, dated as of September 19, 2014 (incorporated by reference to Exhibit 10.22 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on October 10, 2014).
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10.17	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 (incorporated by reference to Exhibit 10.27 to the Registration Statement on Form S-1/A (No. 333-198383) filed with the Securities and Exchange Commission on April 17, 2015).
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10.26	Sublease Agreement by and between SeeChange Health Management LLC and Jaguar Animal Health, Inc., dated June 23, 2015 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (No. 001-36714) filed with the Securities and Exchange Commission on June 23, 2015).
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10.29†	Manufacture and Supply Agreement between Jaguar Animal Health, Inc. and Glenmark Pharmaceuticals Ltd., dated September 22, 2015 (incorporated herein by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q (No. 001-36714) filed with the Securities and Exchange Commission on November 13, 2015).
10.30*	Formulation Development and Manufacturing Agreement between Jaguar Animal Health, Inc. and Patheon Pharmaceuticals Inc., dated October 8, 2015.

Exhibit No.	Description
10.31#	Offer Letter by and between Jaguar Animal Health, Inc., and Karen Wright, dated as of October 11, 2015 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on December 18, 2015).
23.1*	Consent of Independent Registered Public Accounting Firm.
23.2**	Consent of Reed Smith LLP (included in Exhibit 5.1).
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* Filed herewith.

** To be filed by amendment.

† Confidential treatment granted as to portions of the exhibit. Confidential materials omitted and filed separately with the Securities and Exchange Commission.

Management contract or compensatory plan or arrangement.

Crofelemer Enteric Coated Tablets - 20mg and 80mg Strengths

Formulation Development and GMP Manufacture Proposal for

Jaguar Animal Health

P-CRP-84900-R6

Patheon Pharmaceuticals Inc. ("Patheon")		Jaguar Animal Health ("Client")	
By:	/s/ Francis P. McCone	By:	/s/ Steven R. King
Name:	Francis P. McCone	Name:	Steven R. King
Title:	Secretary	Title:	EVP Sustainable Supply, IP
Date:	October 8, 2015	Date:	October 6, 2015

Effective Date: October 8, 2015

APPROVED BY LEGAL

FPM	10-8-15
Initials	Date

Patheon
Performance the World Over®

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Part A: Project Goals & Execution Strategy

Executive Summary

Jaguar has requested that Patheon develop a 20mg and 80mg Crofelemer tablet (the **"Product")** for use in animals. The process and formulation will be the same as that used with Fulyzaq tablets that are manufactured for Salix. An assumption is made that the tablets will be dose proportional to the 125 mg tablets. The blend will be compressed into tablets and then enteric coated. Up to two feasibility batches will be manufactured followed by registration batches of each strength, with matching placebo batches.

This Proposal (consisting of Parts A through G) when executed by Patheon and Client will become a contract binding on the parties (the **"Contract"**). The term of the Contract will be from the Effective Date until completion by Patheon of these Services. This Proposal is a time-limited offer, which will remain open for acceptance by Client for 60 days of the issue date noted below. Following the expiry of this offer, Patheon may, at its sole option, waive the time limit or rescind this offer without further notice to Client.

Part B: Budget Summary

BUDGET SUMMARY

10 PROJECT START-UP **USD**

	ACTIVITY	PRICE
	Project Start-Up	**$ No Charge**

20 ANALYTICAL DEVELOPMENT **USD**

	ACTIVITY	PRICE
2.1	**Product Potency and Content Uniformity Assay (Supplemental Validation Phase III)**	**$ 16,634**
2.2	**Product Related Substances Assay (Supplemental Validation Phase III)**	**$ 8,263**
2.3	**Product Dissolution 2-Stage Assay by HPLC (Supplemental Validation III)**	**$ 30,200**
2.4	**Specification Generation (Assumed 1 Specification)**	**$ 899**
	Total	**$ 55,996**
	Material and Supply Fee:	**$ 4,480**

3.0 MICROBIOLOGY **USD**

ACTIVITY				MILESTONE PRICE	PRICE
Preparation				**$ 1,356**	
Protocol				**$ 226**	
No. of Trials	**No. of Materials**	**No. of Pharmacopeia**			
One Trial	2	1	$ 4,928		
Two Trials	2	1	$ 7,392		
Three Trial	2	1	$ 9,856		
Four Trials	2	1		**$ 12,320**	
SUB TOTAL (Number of Trials Assumed = 4 Trials)					**$ 13,902**
Other Tests Available:					
pH check			$ 85		
Bioburden			$ 425		
AET - USP			$ 708		
AET - EP/BP			$ 878		
AET - JP			$ 878		
Additional Organism			$ 255		
Total					**$ 13,902**
				Material and Supply Fee:	**$ 1,112**

4.0 FEASIBILITY DEVELOPMENT **USD**

ACTIVITY		MILESTONE PRICE	PRICE
Feasibility Batches (2)	*(20mg and 80 mg)*		
Manufacturing		$ 61,288	
Analytical Support		$ 24,219	
			$ 85,507
Total			**$ 85,507**
		Material and Supply Fee:	**$ 6,841**

6.0 GMP PLACEBO BATCH **USD**

ACTIVITY	MILESTONE PRICE	PRICE
First Batch Manufacturing	$ 38,841	
Packaging	$ 8,616	
Analytical Support	$ 2,881	
Total Par Batch	$ 50,338	
1 Batch TOTAL		$ 50,338
Back to Back Batch Manufacturing	$ 31,669	
Packaging	$ 7,775	
Analytical Support	$ 2,881	
Total Per Batch	$ 42,325	
1 Back to Back Batch TOTAL		$ 42,325
Total		**$ 92,663**
	Material and Supply Fee:	**$ 7,413**

6.0 STABILITY - GMP PLACEBO BATCH **USD**

ACTIVITY		PRICE
Number of Lots	2	
Total Samples	4	

	Protocol Generation				$ 1,246

Pullpoint Months	25C / 60% RH	40C / 75% RH	Microbiology	Samples per pullpoint	Cost per pullpoint (Milestone Price)
T=3	x			2	$ 3,249
T=6	x		x	2	$ 4,011
		Summary Report Generation			$ 1,780
		Total			**$ 10,286**
			Material and Supply Fee:		**$ 823**

7.0 REGISTRATION BATCHES

USD

ACTIVITY	MILESTONE PRICE	PRICE
First Batch Manufacturing	$ 49,343	
Packaging	$ 11,345	
Analytical Support	$ 8,905	
Total Per Batch	$ 69,593	
1 Batch TOTAL		$ 69,593
Back to Back Batch Manufacturing	$ 36,088	
Packaging	$ 10,415	
Analytical Support	$ 8,905	
Total Per Batch	$ 55,408	
5 Back to Back Batch TOTAL		$ 277,042
Manufacturing Report		$ 11,668
Total		**$ 358,303**
	Material and Supply Fee:	**$ 28,664**

8.0 STABILITY - REGISTRATION

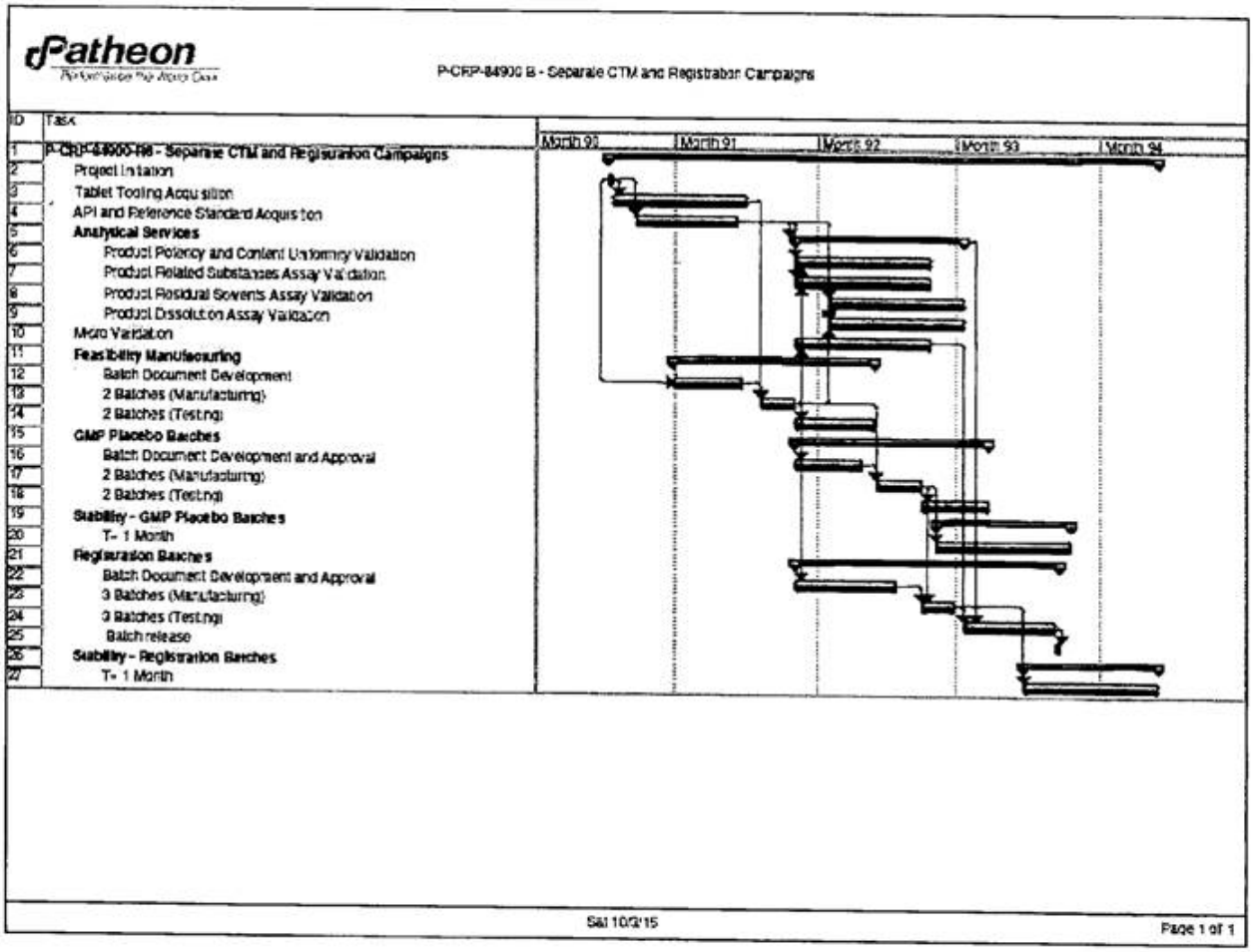
USD

ACTIVITY		PRICE
Number of Lots	6	
Total Samples	60	
Protocol Generation		$ 1,246

Pullpoint Months	25C / 60% RH	40C / 75% RH	MICROBIOLOGY	AET	Samples per pullpoint	Cost per pullpoint (Milestone Price)
T=1		x			6	$ 17,827
T=3	x	x			12	$ 29,894
T=6	x	x			12	$ 29,894
T=9	x				6	$ 17,827
T=12	x		x		6	$ 20,114
T=18	x				6	$ 17,827
T=24	x		x		6	$ 20,114
T=36	x		x		6	$ 20114
	Summary Report Generation					$ 1,780
	Total					**$ 176,637**
				Material and Supply Fee:		**$ 14,131**
BUDGET TOTAL					**USD**	**$ 793,292**
MATERIAL AND SUPPLY FEE					**USD**	**$ 63,464**
GRAND TOTAL					**USD**	**$ 856,756**
PROJECT INITIATION FEE					**USD**	**$ 198,000**

Part C: High Level Timeline

The timeline below is presented at this stage as a non-binding projected estimate of the milestone durations and deliverables envisioned at the time of issuing this proposal. Patheon will use commercially reasonable efforts to adhere to timeline estimates shown below by initiating the project as soon as Client award by signature is received. This timeline does not take into account the lead time to receive any required material, equipment and client documentation that may affect the start of the project and/or milestone attainment.



Full PDF Version of Timeline:

P-CRP-84900-R6
TIMELINE

Part D: Project Activities

In order to deliver Crofelemer 20 mg and 80 mg Enteric Coated Tablets to Client, Patheon proposes to execute the project activities as described below. Please note that any estimated durations illustrated below for completing an activity should be viewed as stand-alone, non-binding examples only at this stage which may not take any pre-requisite or associated activities into account.

1. Project Start-Up

Goal:

- To co-ordinate and schedule initial project kick off activities within Patheon site, and to ensure the correct handling, storage and safety instructions for the API are followed.

Deliverables:

- Scientific review of Client technical documentation, literature review in preparation for project implementation, documentation support for receipt of Client materials (API), procurement support for project specific items (e.g. raw materials, tooling, analytical columns), scheduling and attendance of cross functional team meeting with Client for project kick off.

- Preliminary EH&S safety categorisation for the API, Safe System of Work report and training of Patheon staff.

Estimated Duration:

- Up to two weeks

Active Pharmaceutical Ingredient(s) **("API"):**

- Crofelemer
- Patheon's preliminary categorisation = Category 2
- API will be stored and shipped under ambient conditions
- Finished product will be stored and shipped under ambient conditions

· Dust monitoring / flexible containment is assumed not required

2. Analytical Services

Goals:

· To evaluate suitable finished product methods to support testing of non-cGMP development activities, and to validate the developed methods to support release and stability testing of cGMP batches

Deliverables:

· Patheon will generate a data summary for each method development activity for Client review

· Patheon will prepare a protocol and generate a report for each method validation activity for Client review

Estimated Duration:

· Approximately 4 months in total

Assumptions:

· It is assumed that the same method is used for testing Product Identity, Blend Uniformity/Content Uniformity, Potency and Related Substances. If separate methods are required, the additional costs will be captured in a Change of Scope.

· A cleaning residuals assay was previously developed and validated under a separate Patheon Proposal. If the originally developed method can be used for this project there will be no duplication of this activity.

Method Validation

2.1 Product Potency and Content Uniformity (Supplemental Validation Phase III)

2.2 Product Related Substances Assay (Supplemental Validation Phase III)

2.3 Product Dissolution Assay — 2-Stage (Supplemental Validation Phase III)

Note: All methods are validated to Phase III

Other Analytical Services

2.4 Specification Generation (fee information presented on a per-specification basis)*

** Where required, specifications for raw materials, drug substance etc. would be prepared and entered onto the Patheon standard control and ordering system.*

Definitions:

Method Validation Phase Levels

Patheon will validate the test method required to support the Project. The validation will challenge the following parameters:

Phase Ill

· System Suitability
· Linearity
· Specificity
· Range
· Accuracy
· Repeatability
· Solution Stability
· Quantitation Limit (if applicable)
· Detection Limit (if applicable)
· Intermediate Precision
· Robustness

3. Microbiology

Goal:

· To validate test methods required for Microbial Limit Tests **(MLT)** as part of the release and stability testing requirements for cGMP batches

Deliverables:

- Patheon will prepare a protocol prior to commencing the microbiology validation, and a summary report will be compiled upon completion of the trials for Client review.

Estimated Duration:

- Approximately 4 - 5 weeks

Scope

Patheon will perform validation of microbial recovery from pharmacopoeial articles following USP<1227> guideline and USP Harmonized methods (USP<61> and <62>) on Crofelemer Enteric Coated Tablets - 20mg and 80mg Strengths. A harmonized specification based on USP<1111> will be followed to meet USP/EP/JP acceptance criteria for pharmaceutical preparations and substances for pharmaceutical use. The validated methods will cover USP, EP and JP compendia for Microbiological Examination of Non-Sterile Products.

Each formulation and non proportional dose strength should be validated unless there is justification for matrixing. Each trial will be a different dilution targeted to establish adequate recovery. The cost shown applies to one formulation and strength and four trials. If required, additional costs will be covered by a Change of Scope.

4. Feasibility Manufacturing

Goal:

- The purpose of this effort is to manufacture a feasibility batch to assure the manufacturing process adequately performs prior to manufacture of the GMP product for clinical use.

Deliverables:

- Patheon will manufacture the proposed feasibility batches and provide the batch records to Client for review. Results and findings for feasibility manufacturing will be documented in a summary report.

Estimated Duration:

- Approximately 6-8 weeks

Scope:

The following process and equipment train will be used during batch manufacture:

Process Steps	Equipment
Screening /Blending	Screens, 16 Quart Twin Shell Blender
Compression	Piccola Rotary Tablet Press
Manufacture EC solution	Stainless Steel Mixing Container
EC Film Coating	19” Coating Pan

- 2 feasibility batches (20mg, and 80mg)
- Batch record, cGMP conditions & No QA review
- Excipients released as per USP/NF/EP
- Batch Size: Approximately 5 kg per batch (before taking losses, retain samples etc in account)
- Cleaning verification conducted
- Bulk Packaged
- Per batch pricing shown in the Budget Summary

- Manufacturing report

The following In-Process and Finished Product testing will be performed:

In-Process Testing	Finished Product Testing
· Moisture (LOD)	· Appearance
· Particle Size Distribution (Sieve Analysis)	· Moisture (KF)
· Bulk & Tapped Density	· Potency
· Flow Properties	· Related Substances
· Blend Uniformity (n=6)	· Content Uniformity (n=10)
· Appearance	· Dissolution 2-Stage (profile by HPLC, n=6)
· Tablet Weight / Weight Variation	· Residual Solvents
· Hardness	
· Thickness	
· Friability	
· Disintegration	

5. GMP Placebo Manufacturing

Goal:

· To provide Client with units of GMP Placebo tablets in bottles for use in clinical trials.

Deliverables:

· Master Batch Records (MBRs) and supply of GMP Placebo tablets. Patheon will provide a GMP manufacturing report to Client upon completion of GMP manufacturing.

Estimated Duration:

· Approximately 3 weeks

Scope:

The following process and equipment train will be used during batch manufacture:

Process Steps	Equipment
Screening /Blending	Screens, 16 quart twin shell blender
Compression	Piccola Rotary Tablet press
Manufacture EC solution	Stainless steel mixing container
EC Film Coating	19” coating pan

· 2 GMP Placebo batch batches (20mg and 80mg)
· Batch record, cGMP conditions & QA review
· Excipients released as per USP/NF/EP
· Batch Size: Approximately 5 kg per batch (before taking losses, retain samples etc into account)
· Packaged into HDPE bottles (i.e. 30’s) for stability
· Per batch pricing shown in the Budget Summary

The following In-Process and Finished Product testing will be performed:

In-Process Testing	Finished Product Testing
· Appearance	· Appearance
· Tablet Weight / Weight Variation	· Moisture (KF)
· Hardness	· Absence of Active
· Thickness	· Residual Solvents
· Friability	· Microbial Limit Testing (MLT)
· AQL	
· Disintegration	

6. Stability — GMP Placebo Batch

Goal:

· To provide shelf life data to support the clinical trials Deliverables:

· Data summaries will be provided to Client at intermediate time points, and a stability summary report will be provided to Client following completion of the study.

Estimated Duration:

· Up to 6 months

Scope:

Patheon will design a stability program (single orientation, single container type) to monitor:

· 2 packaged lots of GMP placebo material under ICH conditions
· Samples will be placed on storage concurrently and also tested concurrently at each test point
· Unless indicated in the stability protocol, the analytical data from each CTM lot manufactured at Patheon will be used as initial time point (T=0) data

The following storage conditions and test-points are suggested for testing:

Storage Conditions	Time Point (Months)										
	0	1	3	6	9	12	18	24	36	48	60
40ºC / 75% RH											
30ºC / 75% RH	R										
25ºC / 75% RH			X	X,M							

R: Release data
X: Physical/Chemical testing
M: Micro testing

C: Contingency samples; testing to be performed only if significant change is observed at the next level condition or at the request of Client [no fees included at this stage]

The following stability testing is proposed for samples at each pull point:

Testing on Stability Samples (GMP Placebo Batch)

- Appearance
- Moisture (KF)
- Microbial Limit Testing (Annually)

Client may instruct Patheon to amend the stability schedule as required. Minor changes such as those that increase the number of pull points, but maintain the testing and number of lots as outlined above, invoice will be issued for the new pull points without issuance of a formal change of scope. Major changes that affect the type of test (as mentioned above) to be performed at a given pull point, the price per sample may be re-evaluated. A formal change of scope will be issued to capture the changes.

Patheon will prepare a stability summary report following completion of the study. The summary report will consist of a high level evaluation of whether the data for each test indicates that a change has occurred on stability and compared to specification. The report will not include any statistical interpretations or shelf life evaluations. If statistical analysis of stability data is desired by Client, a Change of Scope will be issued based on the required work.

7. Registration Batches

Goal:

- To provide Client with 6 batches of active tablets (3 batches at each strength, 20 mg and 80 mg) for registration purposes.

Deliverables:

- Patheon will manufacture the proposed registration batches and provide the batch records to Client for review. Patheon will also prepare a registration protocol and summary report for Client review.

Estimated Duration:

- Approximately 10 weeks

Scope:

The following process and equipment train will be used during batch manufacture:

Process Steps	Equipment
Screening /Blending	Screens, 16 Quart Twin Shell Blender
Compression	Piccola Rotary Tablet Press
Manufacture EC solution	Stainless Steel Mixing Container
EC Film Coating	19” Coating Pan

- 6 registration - Active batches, 3 at each strength (20mg and 80mg)
  - Initially 1-20 mg batch and 1-80 mg batch will be manufactured
  - At a date yet to be determined 2-20 mg and 2-80mg batches will be manufactured
- Back to back processing
- Protocol, Batch record, cGMP conditions & QA review
- Excipients released as per USP/NF/EP

- Batch Size: Approximately 5 kg per batch (before taking losses, retain samples etc into account)
- Packaged into HDPE bottles (i.e. 30’s) for stability
- Cleaning verification conducted
- Per batch pricing shown in the Budget Summary
- Manufacturing report

The following In-Process and Finished Product testing will be performed:

In-Process Testing	Finished Product Testing
Moisture (LOD)	Appearance
Particle Size Distribution (Sieve Analysis)	Moisture (KF)
Bulk & Tapped Density	Potency
Flow Properties	Related Substances
Blend Uniformity (n=6)	Content Uniformity (n=10)
Appearance	Dissolution 2-Stage (profile by HPLC, n=6)
Tablet Weight / Weight Variation	Residual Solvents
Hardness	Microbial Limit Testing (MLT)

- Thickness
- Friability
- AQL
- Disintegration

8. Stability— Registration Batches

Goal:

- To provide shelf life data to support product registration

Deliverables:

- Data summaries will be provided to Client at intermediate time points, and a stability summary report will be provided to Client following completion of the study.

Estimated Duration:

- Up to 36 months

Scope:

Patheon will design a stability program (single orientation, single container type) to monitor:

- 6 packaged lots of CTM Active material under ICH conditions
  - 3 lots of 20 mg
  - 3 lots of 80 mg
- Samples will be placed on storage concurrently and also tested concurrently at each test point
- Unless indicated in the stability protocol, the analytical data from each CTM lot manufactured at Patheon will be used as initial time point (T=0) data

Please note that the pricing provided for stability is based on a full ICH program for all X packaging lots. The cost can be substantially reduced by putting in place a matrix testing design. Patheon would welcome the opportunity to further discuss this approach.

The following storage conditions and test-points are suggested for testing:

Storage Conditions	Time Point (Months)										
	0	1	3	6	9	12	18	24	36	48	60
40ºC / 75% RH		X	X	X							
30ºC / 75% RH	R										
25ºC / 75% RH			X	X	X	X,M	X	X,M	X,M		

R: Release data
X: Physical/Chemical testing
M: Micro testing
C: Contingency samples; testing to be performed only if significant change is observed at the next level condition or at the request of Client [no fees included at this stage]

The following stability testing is proposed for samples at each pull point:

Testing on Stability Samples (Registration Batch)

- Appearance
- Moisture (KF)
- Potency
- Related Substances
- Dissolution 2-Stage (profile by HPLC, n=6)
- Microbial Limit Testing (Annually)
- Disintegration

Client may instruct Patheon to amend the stability schedule as required. Minor changes such as those that increase the number of pull points, but maintain the testing and number of lots as outlined above, invoice will be issued for the new pull points without issuance of a formal change of scope. Major changes that affect the type of test (as mentioned above) to be performed at a given pull point, the price per sample may be re-evaluated. A formal change of scope will be issued to capture the changes.

Patheon will prepare a stability summary report following completion of the study. The summary report will consist of a high level evaluation of whether the data for each test indicates that a change has occurred on stability and compared to specification. The report will not include any statistical interpretations or shelf life evaluations. If statistical analysis of stability data is desired by Client, a Change of Scope will be issued based on the required work.

9. Standard Assumptions

Standard Assumptions

1. A fixed "Material and Supply Fee" equal to 8% of the total project budget, excluding costs for EH&S, is included in Part B: Budget Summary **("Budget Summary")**, to cover the cost of the required Patheon purchased materials and supplies, and is subject to Section 3 of Part G: Legal Terms and Conditions.

2. Provided that there are ongoing billable activities taking place (excluding stability):

   · Patheon will provide project management support to monitor the progress of the project against established timelines and will provide Client with updates.

   · The Project Manager will coordinate with Patheon's project team and Client and commit up to two one hour teleconference meetings per month and one quarterly Patheon site face-to-face meeting.

   · Project management will coordinate distribution of project documentation to Client. Typical documentation may include protocols, reports, executed batch records, Certificates of Analysis, BSE/TSE statements, summary data and analytical methods.

   · The fee for project management is incorporated in the breakdown cost for each activity in the Budget Summary.

3. At Client request, issued documents may need to be updated throughout the life of the project. The requirement for update could be based on, but is not limited to, new stability data or new storage conditions. Documents requiring update may include Certificate of Analysis, specifications, test methods, reports or any other document already issued by Patheon. Any additional costs for the update will be communicated to Client via the Change of Scope process prior to initiating the documentation change.

4. It is assumed that the API and/or formulation do not absorb/adsorb to any metal, glass or other components used during the processing and analytical testing of the batch.

5. Patheon will receive and release the API for cGMP manufacture based on the following:

   (i) Identification testing

   (ii) The accompanying Certificate of Analysis (COA) from the API Vendor (Client qualified) and COA from Client.

   The identification of unknown impurities detected during the study is not included as part of this Project Proposal.

6. Client will provide Patheon with accurate, suitable, sufficient and the most current reference standards.

7. For analytical out of specification (OOS) investigations, Patheon will conduct investigations according to Patheon's standard operating procedure and report findings to Client. The cost of the investigation will be borne by Client should the OOS be a result of the nature of the Product, rather than Patheon error in processing or testing. If Client bears the cost, the cost of the investigation and associated analytical testing will be captured in a Change of Scope to this Contract.

8. Prior to commercialization, Patheon will evaluate the Product and the proposed launch volume and, at the request of Client, select the appropriate Patheon facility for commercialization.

10. Patheon's Project Management

Patheon will provide project management support to monitor the progress of the project against established timelines and will provide Client with routine updates while there are ongoing billable activities in progress (excluding stability).

THE PATHEON PROJECT MANAGER

1. The Project Manager will lead the Patheon project team, liaising with internal functional team members and Client. They will:

   · Commit up to two one hour teleconference meetings per month

   · One quarterly Patheon site face-to-face meeting

   · Delivery of project documentation to Client. Documentation may include protocols, reports, master batch records or executed batch records, Certificates of Analysis, BSE/TSE statements, summary data and analytical methods.

2. The Project Manager will have following background:

   · B.S. as a minimum qualification, but may also include M.S. and MBA

   · Diverse backgrounds include prior experience with dosage form development, pharmaceutical manufacturing, analytical development, managing clinical trials, QA and Regulatory Affairs, etc.

   · In depth training provided which is aligned with PMI requirements. PMP certification is also supported.

3. Patheon's Project Manager acts as the primary liaison between the client and Patheon's internal organization.

4. Uses ChangePoint to manage project plans, resources, documents, project budget, etc. A Schedule Flight Board, similar to an airport's flight board, provides visibility on the order readiness items (e.g. MBR, raw materials and bulk material).

COMMUNICATION

5. Patheon's Project Manager schedules and leads bi-weekly conference calls scheduled between the project team and Client. Other calls can be arranged as agreed between the parties and *ad hoc* calls accommodated as needed. The frequency of meetings can be increased during peak activity times and the Patheon Project Manager is available *via* e-mail/phone for discussions outside of scheduled meetings.

    · Minutes are taken which can generally be customized as per Client / project requirements and would typically include tracked action items for example

    · For specific technical issues, direct contact between functional representatives and Client counterparts is encouraged provided the Project Manager is kept informed

    · Each project is reviewed by the respective technical areas during the course of the project

PROJECT REVIEWS

6. PDS Client Services:

    · Patheon seeks to actively listen for and respond to Client feedback with the aim of providing a very positive Client experience.

    · The PDS Client Service team manages a feedback process which facilitates periodic checks on team and service performance.

    · Direct feedback is also encouraged.

    · Survey feedback is reviewed at a senior level and is used to help understand what is going well and where improvements can be made.

    · A transparent escalation process is in place, allowing a Patheon or Client team member to escalate an issue to Senior PDS Leadership.

    Regular face to face meeting coordinated by Patheon's Project Manager and are encouraged as a forum for review. The frequency of the face to face meetings can be aligned with the project duration.

    · High level reviews of overall project

    · What worked well

    · Areas for improvement

    · Milestone achievement reviews

    · Review of metrics pre-defined with Client

    · Lessons learned

Part E: Capital Requirements

Dedicated equipment, tooling, and change parts will be required to be sourced and purchased at the sole expense of Client to support the manufacture of Crofelemer Enteric Coated Tablets - 20mg, 40mg and 80mg Strengths at Patheon. Fees given are subject to change pending design of the manufacturing process and would be confirmed at the time of placing an order.

At this stage, it is assumed that the equipment, tooling and change parts will remain the property of Client but will be utililzed by Patheon for the term of the Contract. This strategy should be confirmed between the parties prior to execution of the Contract.

Detailed Description	Estimated Cost (USD) [excluding handling fee]
Tableting Tooling	$ 3,000
Total	**$ 3,000**

It is assumed that the purchase, installation and operation of the dedicated equipment will not necessitate any modifications to be made to the existing Patheon facilities. A Patheon standard approach to equipment qualification would be conducted and would include preparation of IQ and OQ documentation and execution of these protocols.

Part F: Legal Terms and Conditions

(Certain capitalized terms used herein but not defined are defined in the Project Proposal)

1. Services:

(a) Patheon agrees to perform the pharmaceutical development services described in the Project Proposal ("**Services**").

(b) Parties must agree on changes, deletions or additions to the Services ("**Changes**").

(c) Minor Changes will be confirmed by electronic mail, facsimile or other written document. Unless otherwise agreed by the parties, the implementation of optional items set forth in the Project Proposal will be considered a Minor Change. Significant Changes (such as a request by Client to change the Project Activities) will be confirmed by a Change of Scope Agreement.

2. Project Initiation Fee and Milestone Payments:

A. Project Initiation Fee: Before the start of each project, Client will pay Patheon a project initiation fee (the "**Project Initiation Fee**") equal to 25% of the Budget Total set forth in Part B: Budget Summary (the "**Budget Summary**"). The Project Initiation Fee is due upon issuance of the invoice. Patheon will not start the Services until the Project Initiation Fee is paid.

B. Milestone Payments:

(a) Client will pay Patheon for the Services as outlined in the Project Proposal and for any Changes which will be invoiced separately at Patheon's then prevailing hourly rates. Patheon may issue an invoice upon completion of each milestone set out in the Budget Summary. Each activity that is assigned a specific milestone price in the Budget Summary is a milestone. The Project Initiation Fee will be applied to the initial milestone payment invoices until the Project Initiation Fee is exhausted.

(b) Each Patheon invoice will be due and payable within 30 days of the date of the invoice. Patheon will email the invoice on the date issued to the email address provided by Client.

(c) If any portion of an invoice is disputed, Client will pay Patheon the undisputed amount and the parties will use good faith efforts to reconcile the disputed amount as soon as practicable. Interest on undisputed past due accounts will accrue at a rate of 1.5% per month.

(d) Patheon may, at its option, suspend all Services until all undisputed outstanding invoices have been paid in full.

3. Supply of API and Materials:

(a) Client will, at its expense, supply Patheon with sufficient quantities of active pharmaceutical ingredient ("**API**") for Patheon to perform the Services. All shipments from Client to Patheon will be made DDP (Incoterms 2010) Patheon's site unless otherwise agreed. All shipments of API will be accompanied by certificate(s) of analysis from the API manufacturer including confirmatory results demonstrating that the API complies with the manufacturer's API specifications.

(b) Unless otherwise agreed to by the parties, for all Pre-Clinical, Phase I, II, and III Projects, Patheon will purchase common materials and supplies required to perform the Services. Patheon will charge Client a fixed "**Material and Supply Fee**" as set forth below based upon the Product-Type and Project Phase calculated as a percentage of the Budget Total in the Project Proposal (excluding any charge associated with the Project Start-Up), that will cover the cost of the required Patheon purchased materials which may include analytical columns, reagents, common excipients, packaging components, receiving, raw material shipping, handling, brokerage fees, storage fees, and change parts:

Material and Supply Fee*

Product Type	Project Phase	Fee Schedule
Immediate Release Non-Sterile Dosage Form	**Pre-Clinical, Phase I, II & Ill**	**Fixed fee at 6% of total project budget**
Modified Release Non-Sterile Dosage Form and Liquid Filled Hard Gelatin Capsules	**Pre-Clinical, Phase I, II & Ill**	**Fixed fee at 8% of total project budget**

*The respective Material and Supply Fee will be invoiced within each milestone payment as provided in the Project Proposal.

Not included in the Material and Supply Fee are items which are exclusive to the project **("Exclusive Items")** that cost in excess of $1,500 each such as exclusive excipients, exclusive vials and packaging components, compression tooling, blister tooling, specialty laboratory columns, project specific change parts, and reference standards including those under the applicable United States Pharmacopoeia, the National Formulary, the British Pharmacopoeia, the European Pharmacopoeia or the Japanese Pharmacopoeia. The cost of these Exclusive Items necessary for Patheon to perform the Services will be billed separately and charged to Client at Patheon's cost plus an additional 15% as a handling charge. Client will be invoiced on receipt of any Exclusive Item.

(c) The Material and Supply Fee will not apply to Commercial Technology Transfers*. For these Projects, Patheon will purchase all common materials and supplies and all project specific items (such as raw materials, excipients, packaging, special equipment, tooling, change parts, laboratory columns and reagents, reference standards including those under the applicable United States Pharmacopoeia, the National Formulary, the British Pharmacopoeia, the European Pharmacopoeia or the Japanese Pharmacopoeia) necessary for Patheon to perform the Services. The cost of the

common materials and supplies and of the project specific items will be billed back to Client at Patheon's cost plus an additional 15% as a handling charge as set forth below:

Bill Backs

Product Type	Project Phase	Fee Schedule
Non-Sterile	**Commercial Technology Transfer (Scale-up, Registration & Validation)**	**Bill back of actual cost plus 15% handling charge**

*"Commercial Technology Transfer" means the activities, such as process, packaging and cleaning validation, and analytical methods transfer, required to support the transfer of commercial manufacturing of Client's approved Product to a Patheon facility.

(d) For any Exclusive Items purchased by Patheon which have expired or which no longer have any forecasted requirements, Patheon will contact Client regarding instructions to either dispose of or ship these Exclusive Items to Client. If instructions are not received from Client within 30 days, Patheon reserves the right, at Client's cost, to dispose of the Exclusive Items.

(e) If Client wishes Patheon to use a specific vendor to purchase materials and this vendor is not an approved supplier currently used by Patheon, it will be Client's responsibility to audit and approve the vendor. At Client's request and for an additional fee, Patheon may agree to audit and approve the vendor.

(f) Unless otherwise agreed in a separate Capital Equipment and Expenditure Agreement, if any capital equipment expenditures are required to perform the Services, Client hereby directs Patheon to incur, on its behalf, all expenses and costs for the Client Capital Requirements. Patheon will give Client copies of third party invoices for the Client Capital Requirements within ten days of receipt. Client will pay Patheon for all amounts owing under these invoices so that Patheon may make timely payment to the third parties within 30 days. If the Client Capital Requirements will be owned by Client and Patheon purchases the Client Capital Requirements on behalf of Client, Client agrees that Patheon will be the buying agent for Client and Client hereby grants to Patheon a limited Power of Attorney for this purpose.

(g) If Patheon is required to buy any marketed product to complete the Services, Client acknowledges that the purchases will be made by Patheon on behalf of Client and that Patheon will assume no responsibility or liability whatsoever for the marketed product. All marketed product purchases will be prepaid by Client and unless otherwise agreed to between the parties, Patheon will only place an order for the marketed product once an agreed upon prepayment has been received.

(h) If applicable, Patheon and Client will reasonably cooperate to permit the import of the API and other materials into the country where the Services will be performed. For import of API into the United States, Client or Client's broker will be the **"Importer of Record."** Client's obligation will include obtaining the proper release of API from U.S. Customs and the FDA.

(i) Client is responsible for vendor qualification of Client furnished materials and for providing a certificate of compliance confirming that the materials are compliant with the provisions outlined in the "Note for Guidance on minimizing the risk of transmitting spongiform encephalopathy agents via human and veterinary medicinal products" (EMEA/410/01, Rev.2 or update)

4. Termination:

(a) Either party may terminate this Contract upon written notice where the other party has failed to remedy a material breach of any of its obligations under this Contract within 30 days after receiving written notice of the breach from the other party.

(b) Client may terminate this Contract immediately for any business reason.

(c) Patheon may terminate the Contract if Client requests to reschedule any part of the Services beyond 120 days.

(d) If this Contract is completed, expires, or is terminated by either party as provided for herein, then Client will pay to Patheon:

(i) any fees and expenses due to Patheon for the Services rendered up to the date of completion, expiry or termination;

(ii) all actual costs incurred by Patheon to complete activities associated with the completion, expiry or termination and close of the Services rendered up to the date of completion, expiry or termination including without limitation, disposal fees that may be payable for any materials and supplies owned by Client to be disposed of by Patheon; and

(iii) any additional costs incurred by Patheon associated with the Services that are required to fulfill applicable regulatory and contractual requirements.

(e) Client will arrange for the pickup from the Patheon site of all materials and supplies owned by Client within 30 days after the earlier of the completion, termination or expiration of this Contract. Patheon will charge a storage fee as described in Section 9 after the 30th day following the completion, termination or expiration of the Contract.

(f) If Client cancels or reschedules any manufacturing Services (whether in isolation or through termination of the Contract):

(i) within 30 days before the start date (the **"Start Date"**), Client will pay to Patheon 25% of the fees quoted for the manufacturing Services;

(ii) within 15 days before the Start Date, Client will pay to Patheon 50% of the fees quoted for the manufacturing Services;

(iii) within five days before the Start Date, Client will pay to Patheon 75% of the fees quoted for the manufacturing Services; or

(iv) on or after the Start Date, Client will pay to Patheon 100% of the fees quoted for those manufacturing Services performed by Patheon and 75% of the fees quoted for the manufacturing Services which were not performed due to the cancellation or rescheduling.

Patheon will not charge these fees to Client to the extent that Patheon is able to place the lost manufacturing capacity with another Patheon client.

5. Intellectual Property:

(a) The term **"Intellectual Property"** includes, without limitation, rights in patents, patent applications, formulae, trade-marks, trade-mark applications, trade-names, trade secrets, inventions, copyright, industrial designs, data and know-how. The term **"Arising Intellectual Property"** means any and all Intellectual Property generated or derived by either party or jointly by the parties in the course of performance and/or pursuant to the Services.

(b) For the term of this Contract, Client hereby grants to Patheon, a non-exclusive, paid-up, royalty-free, non-transferable license of Client's Intellectual Property which Patheon must use in order to perform the Services.

(c) All Intellectual Property generated or derived by Patheon in the course of performing the Services, to the extent it is specific to the development, manufacture, use and sale of the Product that is the subject of the Services, will **be** the exclusive property of Client **("Arising Client Intellectual Property").**

(d) All Intellectual Property generated or derived by Patheon while performing the Services which is not specific to, or dependent upon, the Product and which has general application to manufacturing processes or formulation development of drug products or drug delivery systems will be the exclusive property of Patheon **("Arising Patheon Intellectual Property").** Patheon hereby grants to Client, a non-exclusive, paid-up, royalty-free, transferable license of the Arising

Patheon Intellectual Property which Client may use for the manufacture, use, sale, offer for sale, import, or export of the Product.

(e) If Client intends to file a patent application relating to any Arising Client Intellectual Property, Client will give Patheon reasonable time prior to the filing date to review and confirm the inventorship, accuracy of disclosure, and adherence to this Section 5 in the intended filing. Patheon will perform this review and make any suggested revisions to the filing as soon as reasonably practicable.

(f) If Patheon intends to file a patent application relating to or using any Arising Patheon Intellectual Property, Patheon will give Client reasonable time prior to the filing date to review and confirm the inventorship, accuracy of disclosure, and adherence to this Section 5 in the intended filing. Client will perform this review and make any suggested revisions to the filing as soon as reasonably practicable.

(g) Client acknowledges that nothing in this Contract will restrict Patheon from using any Intellectual Property owned or controlled by Patheon, including the Arising Patheon Intellectual Property, in the development and manufacture of products for other Patheon clients or for Patheon's own behalf.

6. Indemnity:

A. Indemnification by Client

Subject to Sections 6B and 6C(c), Client will defend and indemnify Patheon, its Affiliates and their respective directors, officers, employees and agents (collectively, **"Patheon Indemnitees")** from all third-party actions, causes of action, costs (including reasonable legal fees), claims, damages, liabilities and expenses (collectively, **"Losses")** relating to or arising from:

- the manufacture (except as may be contemplated by the Services) or distribution of the Product or the use of the Product by patients either as part of or outside of the scope of any clinical trials;
- the performance of the Services in accordance with the terms of this Contract;
- any misrepresentation, negligence or willful misconduct by Client or any of its Affiliates and their respective directors, officers, employees, and agents (collectively, **"Client Indemnitees");**
- any breach by Client of its obligations or warranties under this Contract; or
- any claim of infringement or alleged infringement of any third party's intellectual property rights in the Product. This indemnity will not apply to the extent that these Losses are:
- determined to have resulted from the negligence or willful misconduct of Patheon; or
- Losses for which Patheon is obligated to indemnify the Client Indemnitees under Section 6B.

B. Indemnification by Patheon

Subject to Sections 6A and 6C(c), Patheon will defend and indemnify the Client Indemnitees from all Losses relating to or arising from:

- any misrepresentation, negligence or willful misconduct by the Patheon Indemnitees;
- any breach by Patheon of its obligations or warranties under this Contract; or
- any claim of infringement or alleged infringement of any third party's intellectual property rights in the Arising Patheon Intellectual Property.

This indemnity will not apply to the extent that these Losses are:

- determined to have resulted from the negligence or willful misconduct of Client; or
- Losses for which Client is obligated to indemnify the Patheon Indemnitees under Section 6A.

C. Limitation of Liability

(a) If Patheon fails to materially perform any part of the Services in accordance with the terms of this Contract, then Client's sole remedy will be to request Patheon to:

- repeat that part of the Service at Patheon's costs if Client supplies the API; or
- reimburse Client for the price for that part of the Service, excluding the cost of the API.

(b) Under no circumstances whatsoever will Patheon reimburse Client for the cost of the API.

(c) Under no circumstances whatsoever will either party be liable to the other in contract, tort, negligence, breach of statutory duty or otherwise for (i) any (direct or indirect) loss of profits, of production, of anticipated savings, of business or goodwill or (ii) any other liability, damage, cost or expense of any kind incurred by the other party of an indirect or consequential nature, regardless of any notice of the possibility of the damages.

D. No Warranty

PATHEON HEREBY EXCLUDES ALL REPRESENTATIONS, WARRANTIES, OR CONDITIONS OF ANY KIND, EITHER EXPRESSED OR IMPLIED, BY FACT OR LAW, OTHER THAN THOSE EXPRESSLY SET FORTH IN THIS CONTRACT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, PATHEON MAKES NO EXPRESS OR IMPLIED WARRANTY OR CONDITION (I) FOR ANY PARTICULAR RESULTS FROM THE PERFORMANCE OF THE SERVICES OR WITH RESPECT TO ANY DATA OR INFORMATION GENERATED THEREFROM, (II) OF FITNESS FOR A PARTICULAR PURPOSE, OR (III) OF MERCHANTABILITY FOR CLIENTS PRODUCT, AND THESE WARRANTIES AND CONDITIONS ARE EXPRESSLY EXCLUDED

7. Regulatory Filings:

If the Services relate to a Clinical Phase III Project or if Patheon is selected as the commercial site of manufacture of the Product which is the subject of the Services under this Contract, then prior to filing with any relevant Regulatory Authorities any clinical trial application including any US Investigational New Drug Application or EU Investigational Medicinal Product Dossier or any documentation that is or is equivalent to this application, Client will give Patheon a copy of the Quality Module (Drug Product section) of the Common Technical Document or any equivalent document that relates to the application (this documentation herein referred to as the "**Application**"). This disclosure will permit Patheon to verify that the Application accurately describes the Services that Patheon has performed and the manufacturing and testing processes that Patheon will perform under this Contract. Patheon requires 21 days to perform this review but the parties may agree to a shorter time for the review as needed.

8. Delivery and Shipping (if applicable):

(a) Delivery (if applicable) of Client's Product will be made EXW (Incoterms 2010) the relevant Patheon Facility shipping point unless otherwise mutually agreed. The Product will be transported in accordance with Client's instructions.

(b) If it is agreed that Patheon is to co-ordinate collection of Client's Product with shipper then it will do so as agent of Client and at Client's sole risk and expense on the basis that: (i) unless Client specifies in writing a shipper that Patheon is obliged to use, Client is deemed to have approved and accepted any shipper used by Patheon; (ii) any shipment charges will either be paid by Client direct to shipper or by Patheon to shipper on Client's behalf, in which case Client will pay Patheon the cost of shipment together with a handling fee of 15%; (iii) Client will obtain any export license or other official authorization necessary to export the Products, will be responsible for complying with all applicable export laws and regulations and will pay any applicable export fees or taxes; and (iv) Client remains responsible for maintaining adequate insurance (including transit insurance) for the Products at all times from delivery.

9. Storage:

(a) Excluding retained samples or stability samples, and unless otherwise agreed between the parties, Client will pay Patheon a $500 per month per pallet, one pallet minimum, storage fee if manufactured Product, clinical trial materials, placebo, development, feasibility, scale-up, registration, validation or any other batches, components, raw materials or supplies (collectively, **"Materials")** are stored at Patheon under room temperature conditions for more than 30 days after their release for shipment by Patheon. This storage fee will increase to $1000 per month per pallet, one pallet minimum, for Materials stored longer than 90 days after their release for shipment by Patheon. For Materials that are controlled substances or for Materials stored under other than room temperature conditions, the following storage fees will apply beginning 30 days after the Materials have been released for shipment:

(i) $100 per cubic foot per month or $200 per cubic foot per month after 90 days for all Materials that are controlled substances or for Materials stored at the Patheon site under conditions of 2°C – 8°C;

(ii) $200 per cubic foot per month or $400 per cubic foot per month after 90 days for all Materials stored at the Patheon site under frozen conditions; or

(iii) If Client requests storage at conditions different than those stated above, then this will be discussed and agreed between the parties on a separate basis.

(b) Patheon reserves the right to refuse to store any Materials, at its sole discretion at any time. Client will assume all risk of loss or damage to the stored Material and it will be Client's responsibility to have appropriate insurance coverage in place for this risk. If Client asks Patheon to destroy any Materials, Client will be responsible for the cost of destruction.

(c) Patheon will, at Client's cost, destroy all stability samples that remain in stability storage for more than 30 days after the issuance of a report by Patheon for the final time point for that given storage condition (according to the agreed stability protocol), or cancellation of a given program. Client may request additional storage time for stability samples beyond 30 days. If Patheon agrees to additional storage time, the Client will be charged storage fees of $500 per 50 liters of walk-in storage volume per month per condition with a $500 per month per condition minimum charge

or $50 per liter of reach-in storage volume per month per condition with a $500 per month per condition minimum charge. The cost of this storage will double after 90 days.

10. Miscellaneous:

A. Assignment and Subcontracting

Neither this Contract, nor any of either party's rights hereunder, may be assigned or otherwise transferred by either party without the prior written consent of the other party. But either party may, upon written notification to the other party, assign, in whole or part, its rights and obligations under this Contract to an Affiliate or, in connection with a merger, consolidation or sale of substantially all of the business to which this Contract relates, to an unrelated third party. Patheon may subcontract the Services hereunder to an Affiliate as specified in the Project Proposal or arrange for any of its Affiliates to perform specific Services under this Contract. Patheon may also arrange for third party subcontractors to perform specific Services under this Contract with Client's consent, this consent not to be unreasonably withheld. For purposes of this Contract, **"Affiliate"** means an entity controlling, controlled by or under common control with another entity, where control is defined as ownership, directly or indirectly, of more than 50% of the voting rights in the entity.

B. Force Majeure

Except for payment obligations, neither party will be responsible for delay or failure in performance resulting from acts beyond the reasonable control and without the fault or negligence of the party, including, but not limited to, strikes or other labour disturbances, lockouts, quarantines, communicable disease outbreaks, riots, wars, acts of terrorism, fires, floods, storms, interruption of or delay in transportation, defective equipment, lack of or inability to obtain fuel, power or components or compliance with any order or regulation of any government entity.

C. Survival

Any termination or expiration of this Contract will not affect any outstanding obligations or payments due hereunder prior to the termination or expiration, nor will it prejudice any other remedies that the parties may have under this Contract. The Confidentiality Agreement and Sections 4, 5, 6 and 7 of the Contract will survive the expiration or termination of this Contract.

D. Independent Contractors

The parties are independent contractors and this Contract will not be construed to create between Patheon and Client any other relationship such as, by way of example only, that of employer-employee, principal, agent, joint-venturer, co-partners or any similar relationship.

E. Confidentiality

The Confidentiality Agreement entered into between the parties will apply to all confidential information about the parties and the Services to be conducted under this Contract and the Confidentiality Agreement is deemed to be incorporated herein by reference. If the Confidentiality Agreement expires or terminates prior to the expiration or termination of this Contract, then the terms of the Confidentiality Agreement will nonetheless continue to govern the parties' obligations of confidentiality for the term of this Contract and for five years thereafter.

F. Patheon Partnermt™

In order to participate in the PatheonPartner™ program, Client must submit a completed PatheonPartner™ External User Account/Access Form to its Patheon project manager. If applicable, the PatheonPartner™ External User Account/Access Form signed by Client will apply to Client's use of the PatheonPartner™ website in respect of the Services.

G. Other Terms

No terms, provisions or conditions of any purchase order or other business form or written authorization used by Client or Patheon will have any effect on the rights, duties or obligations of the parties, or otherwise modify, this Contract, regardless of any failure of Client or Patheon to object to the terms, provisions, or conditions unless the document specifically refers to this Contract and is signed by both parties.

H. Insurance

Each party will maintain during the term of this Contract general liability and product liability insurance which is sufficient to cover their respective liability under this Contract. Either party may request evidence of this insurance.

I. Entire Agreement

This Contract is the complete agreement between the parties for this subject matter and supersedes all other prior agreements and understandings, whether written or oral. Any modifications, amendment or supplement to this Contract must be in writing and signed by authorized representatives of both parties.

J. Severability

If any provision of this Contract is determined by a court of competent jurisdiction to be invalid, illegal, or unenforceable in any respect, that determination will not impair or affect the validity, legality, or enforceability of the remaining provisions, because each provision is separate, severable, and distinct.

K. Facsimile

This Contract may be signed in counterparts and exchanged by facsimile or by “pdf.”

L. No Third Party Benefit or Right

For greater certainty, nothing in this Contract will confer or be construed as conferring on any third party any benefit or the right to enforce any express or implied term of this Contract.

M. Choice of Law

This Contract is governed by the laws of the State of Ohio and the laws of the United States of America applicable therein, without regard to any conflicts-of-law principle that directs the application to another jurisdiction’s laws.

Part G: Appendices

G(1) Company Overview

Patheon® is a leading provider of contract development and commercial manufacturing (CDMO) services to the global pharmaceutical industry for a full array of solid and sterile dosage forms, including small molecule API and biologic drug substances. Patheon encompasses the combined commercial manufacturing capabilities and pharmaceutical product development services, as well as offers a full array of biologic services and pharmaceutical active pharmaceutical ingredients (API) development. Patheon is #1 in product development services, #2 in commercial scale product manufacturing and is #1 in quality. Specific capabilities include the following.

- As global leaders in pharmaceutical manufacturing, Patheon® offers extensive commercial capabilities and capacity for a wide variety of solid and sterile dose forms.
- Pharmaceutical product development work at Patheon® offers the full breadth of advanced scientific and pre-formulation services to quickly characterize drug substance, develop and implement laboratory methodologies, as well as generate the data to enable IND filings.
- Patheon® is a leading provider of process development as well as clinical and commercial scale manufacturing of mammalian cell culture derived products.
- In addition, Patheon® provides active pharmaceutical ingredients or API to the global pharmaceutical industry.

For more information, visit http://www.patheon.com.

G(2) Regulatory History

Target Site — Cincinnati Operations

Patheon’s Cincinnati Operations, Ohio USA, offers both commercial manufacturing and fully integrated Pharmaceutical Development Services (PDS). Cincinnati Operations also serves as a Center of Excellence for controlled and sustained release solid oral dosage forms. Development scale soft and hard gel capsules, osmotic release dosage forms, multi-layer tablets, active coating, and pelletization are among the dosage forms offered at the site. Cincinnati Operations supports API characterization, pre-clinical and pre-formulation activities through its dedicated non-GMP, early development lab. The early development lab at Cincinnati supports SoluPath Flex™ as well as Quick to Clinic™ programs. SoluPath Flex™ is a customizable, fixed-price solution to rapidly improve solubility. Quick to Clinic™ offers high quality phase I clinical trial materials in as little as 12 weeks.

Cincinnati Operations has been registered with the US DEA for more than 30 years. With US DEA manufacturing registrations (schedule II to V), analytical registrations (schedule I to V), and distribution registrations (schedule III to V), the facility is equipped to fully accommodate controlled drug product requirements.

Site Regulatory History

Date of Inspection	Regulatory Authority	Inspection Type

Aug-13	U.S. FDA	PAI
Mar-13	Health Canada	GMP
Jan-13	Japanese PMDA	Desktop PAI
Dec-12	Turkey MOH	PAI
Aug-12	MHRA	GMP
Aug-12	U.S. FDA	PAI and GMP
Jan-12	U.S. FDA	PAI
Oct-11	Japanese PMDA	Desktop PAI
Sep-11	Korean FDA	PAI
Jun-11	ANVISA (Brazil)	PAI
Mar-11	Taiwan TFDA	PAI
Mar-11	U.S. FDA	PAI & GMP
Aug-10	ANVISA	GMP
Jun-10	MHRA	GMP
Mar-10	U.S. FDA	PAI & GMP
Feb-10	Swedish MPA	PAI

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Exhibit 23.1

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One Bush Street
Suite 1800
San Francisco, CA 94104

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 is 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

January 7, 2016

QuickLinks

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm