Issuer Free Writing Prospectus Filed Pursuant to Rule 433 Registration No. 333-208905 January 12, 2016



# **Corporate Presentation** January 2016

#### **Forward-Looking Statements**

This presentation contains forward-looking statements. All statements other than statements of historical facts contained in this presentation, including statements regarding the anticipated timing of the commercial launch of Canalevia, obtaining MUMS designation, and the timing of expanding the indication for Canalevia to acute diarrhea and the timing of data from planned proof of concept, field and other studies 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 forwardlooking 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 presentation 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 presentation and are subject to a number of risks, uncertainties and assumptions, 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 forwardlooking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.



#### **Free Writing Prospectus Statement**

This presentation highlights basic information about us and the offering to which this communication relates. Because it is a summary, it does not contain all of the information that you should consider before investing in our common stock.

We have filed a registration statement (including a prospectus, which currently is in preliminary form) with the US Securities and Exchange Commission (SEC) for the offering to which this presentation relates. The registration statement has not yet become effective. Before you invest, you should read the preliminary prospectus in the registration statement (including the risk factors described therein) and other documents we have filed with the SEC for more complete information about us and the offering.

You may access these documents for free by visiting EDGAR on the SEC website at <u>http://www.sec.gov</u>.

The preliminary prospectus, dated January 7, 2016, is available on the website at <u>http://www.sec.gov</u>.

Alternatively, we or any underwriter participating in the offering will arrange to send you the preliminary prospectus and, when available, the final prospectus and/or any supplements thereto if you contact Aegis Capital Corp., Prospectus Department, 810 Seventh Avenue, 18<sup>th</sup> Floor, New York, NY 10019, telephone: 212-813-1010, email: <u>prospectus@aegiscap.com</u>.

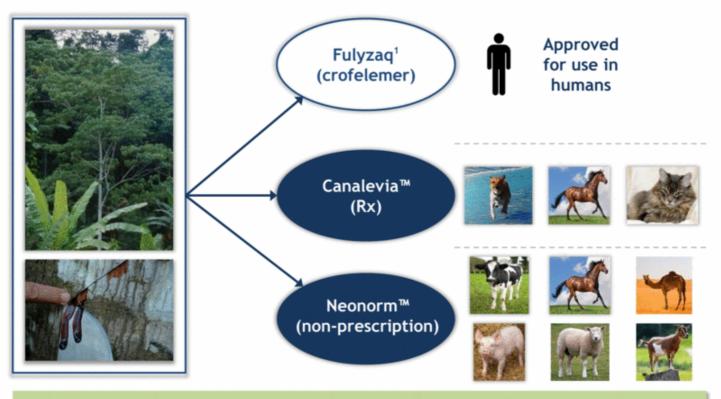


# Public Offering Summary

Issuer	Jaguar Animal Health, Inc.
Exchange/Ticker	NASDAQ CAPITAL MARKET/JAGX
Offering Size	Approximately \$11.0M
Over-Allotment	15% Primary
Sole Book-runner	Aegis Capital Corp.



#### **GI Product Development Strategy**



#### Intellectual property applies globally to all products across species

<sup>1</sup>Fulyzaq was approved by the FDA in 2012 for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy. The product is a registered trademark of and is marketed by Salix Pharmaceuticals, Inc.

💯 Jaguar 🕸

### **Investment Highlights**

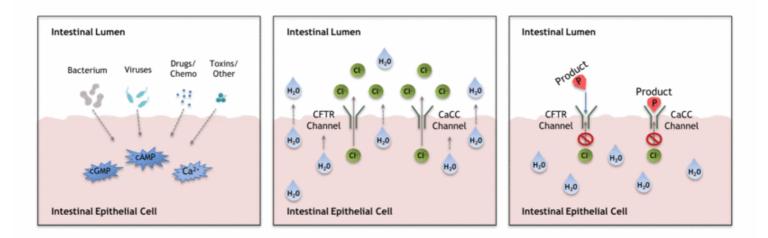
First-in-Class GI Products for Animals	<ul> <li>The <u>only</u> FDA-approved human anti-secretory diarrhea product<sup>1</sup></li> <li>Significant animal and human data</li> <li>Natural products from <i>Croton lechleri</i></li> </ul>
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#### **Common Pathway and MOA in Mammals**

Canalevia and Neonorm are distinct products that act at the same last step in a physiological pathway generally present in mammals, regardless of cause



#### Acts locally in the gut and is minimally absorbed systemically



### **Intellectual Property Portfolio**

- Exclusive worldwide veterinary license to all Napo IP for all veterinary treatment uses and indications for all species of animals
  - Zero to low royalties
  - Exclusive global veterinary license to 2,300+ medicinal plants
- Eight provisional patent applications, three pending patent applications under the Patent Cooperation Treaty, and one U.S. non-provisional patent application
- Notices of Allowance for two NP-500 patent applications
  - $_{\odot}$   $\,$  Jaguar's drug product candidate to treat diseases related to insulin-resistance in dogs, horses & cats
- Prebiotic benefits of polyphenols/Croton lechleri-derived products
- · Rifaximin combination





# **Rx Drug Product Candidates**

Product Candidate Species		Indication	Completed/Anticipated Milestones		
		indication	2015	2016	
	1	CID	Submitted all major technical sections for NADA	<ul><li> 2H, Conditional approval</li><li> Commercial launch</li></ul>	
Canalevia	1	Acute Diarrhea	<ul> <li>Product development meeting with FDA, protocol concurrence</li> <li>Initiate pivotal trial</li> </ul>	<ul> <li>2H, Complete clinical development program</li> <li>Initiate filing NADA</li> </ul>	
	2	Acute Colitis	• 2H, Safety data	<ul> <li>1H, Product development meeting with FDA</li> <li>Initiate filing NADA</li> </ul>	
Specific formulations of crofelemer	<u></u>	Colonic & Gastric Ulcers	<ul> <li>2H, Completed enrollment in POC safety &amp; effectiveness study</li> </ul>	<ul> <li>1H, Safety &amp; effectiveness data</li> <li>1H, Product development meeting with FDA</li> <li>2H, Commence clinical development program</li> </ul>	
		Acute Diarrhea		<ul> <li>Safety &amp; POC data</li> <li>Top-line pivotal efficacy data</li> </ul>	
Virend (topical)		Herpes Virus		• Safety & POC data	
		Obesity-related Metabolic Dysfunction	IP, Notice of allowance		
Specific formulations of NP-500		Metabolic Syndrome	IP, Notice of allowance		
		Type II Diabetes	• IP, Notice of allowance		

### Canalevia: Diarrhea in Dogs

- Diarrhea is one of the most common reasons for veterinary and emergency visits for dogs in the US
  - Six million cases annually of acute and chronic watery diarrhea
- No FDA-approved anti-secretory products for dogs
  - Current treatments
    - Rehydration
    - o Diet change
    - Absorbents/binding agents (Pepto-Bismol)
    - Anti-motility agents (Imodium)
    - Antibiotics
- No current treatments directly address dehydration and watery flow



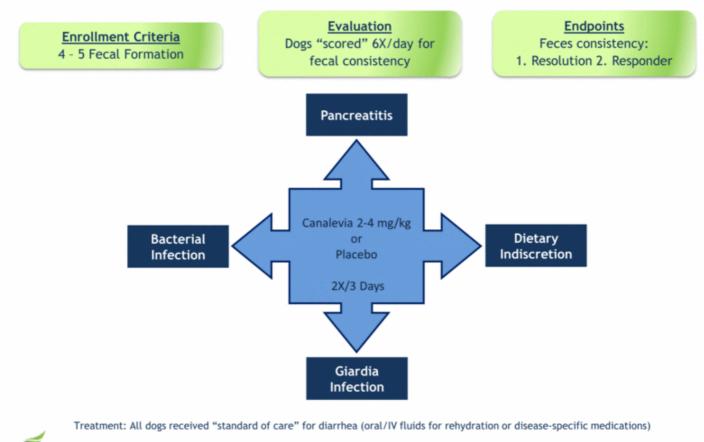


### Canalevia: Chemotherapy-Induced Diarrhea (CID) in Dogs

- Over 230,000 dogs receive chemotherapy in the US
  - Approximately 25% suffer from CID
- Applied for MUMS designation
  - $_{\odot}$   $\,$  MUMS designation is similar to "orphan drug" status  $\,$
- Submitted all required major technical sections to FDA
  - Same manufacturers as human approved NDA
- Completed pilot safety study: 25% of dogs entered study with unformed feces and resolved
- Planned commercialization in 2H 2016



#### Canalevia: Acute Diarrhea Proof of Concept Study -- 39 dogs evaluated



#### **Canalevia: Clinical Results**



#### **Clinical Responsiveness of Canalevia vs. Placebo**

*Response in Canalevia arm is greater than placebo on all days by >10%* 

#### **Canalevia: Pathway to Commercialization**

# Expand label indication for Canalevia to acute diarrhea, regardless of cause





# **Equine Ulcer Opportunity**

- Proof of concept study enrollment completed
- POC results in Q1, 2016
- 97% of high performance horses have either gastric or colonic ulcers\*
- 63% of high performance horses have colonic ulcers\*
- 87% of high performance horses have gastric ulcers\*
- 54% of high performance horses have both colonic and gastric ulcers\*
- No marketed FDA-approved treatments for colonic ulcers in horses
- Chronic treatment cost ~\$50/day
- International synergies for market awareness and demand
- ~4 million high performance horses in US





\*Pellegrini, Franklin L., Results of a large-scale necroscopic study of equine colonic ulcers. J Equine Vet Sci 2005; v. 25, no. 3; 113-117.

## **Neonorm: Non-Prescription Products**

Products	Energies	Use	Anticipated Milestones		
Products	Species		2015	2016	
Neonorm Calf		Improve gut health and normalize stool formation in pre- weaned dairy calves with scours	<ul> <li>Field studies: Include evaluation of herd-wide prophylactic &amp; prebiotic benefits. Initial results support prebiotic effect and beneficial results of Neonorm on weight gain in preweaned calves</li> </ul>	<ul> <li>Launch second-generation formulation (administered in liquid)</li> <li>South American commercial launch</li> </ul>	
Species- specific formulations of Neonorm		Normalize fecal formation (horse foals)	<ul> <li>2H, POC positive results</li> <li>2H, Soft-launched at American Association of Equine Practitioners Trade Show</li> </ul>	• 1H, Commercial launch	
		Normalize fecal formation (adult horses & other farm/production animals)	<ul> <li>Initiate POC studies in various species based on market research</li> </ul>		





A new and unique way to promote normal fecal formation and reduce water loss in foals

- There are currently no anti-secretory products commercially available for the foal market
- Premiered product December 2015 at the American Association of Equine Practitioners Trade Show in Las Vegas





#### Neonorm Foal Proof-of-Concept Study

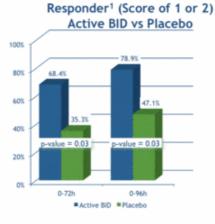
#### Study Objective:

Determine the safety, tolerability, and efficacy of Neonorm Foal

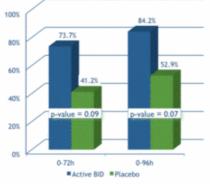
#### Conclusion:

This exploratory study demonstrated the effectiveness of Neonorm Foal vs. placebo in the treatment of diarrhea amongst foals from birth to 16 weeks.





Resolution<sup>2</sup> (Score of 1 or 2) Active BID vs Placebo



<sup>1</sup>Responder: A foal who achieved a formed stool by the end of the treatment period.

<sup>2</sup>**Resolution**: A foal who achieved a formed stool (1 or 2) at any point at any post-baseline assessment. <sup>17</sup>

### Neonorm Calf E. coli Challenge Study\*

#### Study Objective:

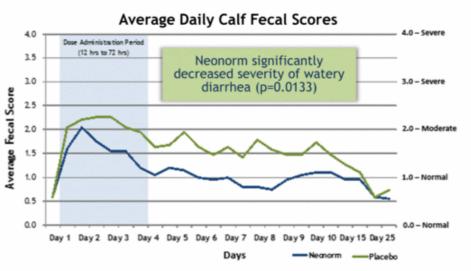
Evaluate severity and incidence of diarrhea, mortality and weight gain.

#### Conclusion:

The total economic benefit from health endpoints, such as weight gain, from Neonorm could be ~\$110 per calf.

Neonom

60



#### Health and Economic Impacts

	Average Duration of Watery Diarrhea (Score ≥2)		Average Duration of Severe Watery Diarrhea (Score 3 or 4)
Neonorm Calf	3.03 days		1.10 days
Placebo	5.16 days		2.42 days
	# of Calves	Mortality	Average Daily Weight Gain After 25 Days
Neonorm Calf	20	5% (1 calf)	15.5 pounds (281 g/day)

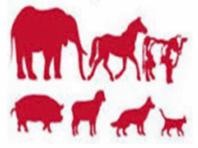


\*Study published in American Dairy Science Association's Journal of Dairy Science, fall 2015

### Neonorm Calf: Field Studies<sup>1</sup>

- Two recently completed field studies:
  - Study conducted in association with Cornell University College of Veterinary Medicine and Field study in Wisconsin further supports benefits related to supporting reductions in water loss associated with diarrhea and supporting weight gain in preweaned calves
- Recently completed Cornell study supports benefit on optimization of intestinal microbiome in calves
  - Cornell trial to investigate this potential prebiotic and prophylactic benefit
  - Second-generation formulation of Neonorm-for entire herd management-that can be administered in water and/or milk replacer





<sup>1</sup>These are results from the two field studies conducted to support Jaguar's commercial launch of Neonorm.



### Jaguar Commercial Strategy

- Focused direct sales force, unique Mechanism of Action
- Educational outreach to key opinion leaders and decision makers
- Complement major distribution partnerships
- Transferable as we expand from production to companion animals
- Meaningful partnerships in international markets: example, signed distribution agreement with Biogenesis Bagó, South America's largest veterinary biotechnology company





Biogenesis Bagó agreement covers red-shaded regions



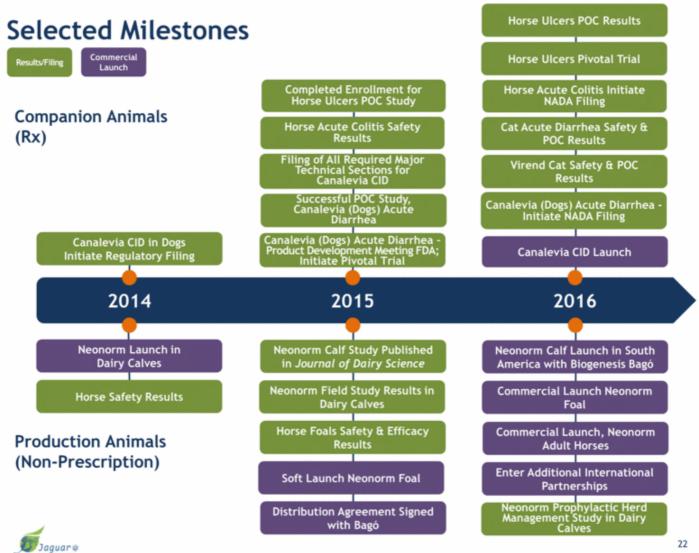
Each dot represents 1,500 cows (Reprinted by permission; March 25, 2013 Hoard's Dairyman Magazine)



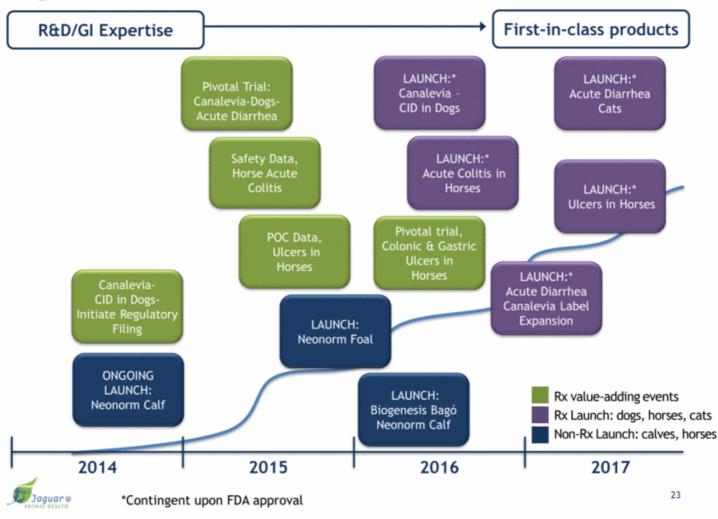
# **US Market Opportunity**

Canalevia Market	Neonorm Market
<b>Rx</b> Companion Animals	Non-Prescription Dairy, Beef, Horses
US Population: 74.0M Cats, 70.0M Dogs <u>Total Cases</u> 6.0M Dogs ~ 2/3 2.9M cats ~ 2/3 3.9M Performance Horses	PopulationIncidence>11.0M Dairy Calves23.9%*~22.0M Beef Calves2.4%**9.2M Horses>10%*Incidence in dairy heifer calves **Beef calves < 3 weeks old





#### **Jaguar Commercialization Horizon**



#### Capital Structure<sup>1</sup>

(Excluding shares to be issued in the proposed offering)

	Shares Outstanding	%
Common Stock	8,124,923	81.6%
Equity Awards-Stock Options (2)	1,026,339	10.3%
Equity Awards-Restricted Stock Units (3)	55,536	0.6%
Warrants to Purchase Common Stock (4)	748,872	7.5%
Fully Diluted Common Shares(5)(6)	<u>9,955,670</u>	<u>100%</u>

(1) As of December 31, 2015.

(2) Consists of 693,006 options outstanding issued under the 2013 Equity Incentive Plan at a weighted average strike price of \$3.74 per share; 226,500 options outstanding issued under the 2014 Stock Incentive Plan at a weighted average strike price of \$4.27 per share; and 106,833 options available for grant under the 2014 Stock Incentive Plan.

(3) Includes 27,768 employee RSUs which vested on 1/1/2016. The remaining 27,768 employee RSUs vest on 7/1/2017.

(4) Weighted average warrant exercise price of \$5.37 per share.

(5) Does not include 26,785 convertible note shares not automatically converted at the offering.

(6) Does not include 550,000 shares added to the 2014 Stock Incentive Plan contingent upon stockholder approval.



#### **Use of Proceeds**

(Offering size of approximately \$11.0 million)

	Amount (\$ Mil.)	%
Canalevia clinical studies and regulatory approval costs	1.9	17.3%
Other Rx clinical studies and regulatory approval costs	1.5	13.6%
Commercial activities for Canalevia and Neonorm inside and outside the US	2.0	18.2%
Studies and field trials for Neonorm for calves, horses & foals	0.5	4.6%
Species specific formulations for all of our products	0.4	3.6%
Third-party manufacturing; including Indena S.p.A	0.4	3.6%
Working capital and general corporate purposes <sup>1</sup>	4.3	39.1%
TOTAL	<u>11.0</u>	<u>100%</u>

<sup>1</sup>Includes offering-related costs



### **Investment Highlights**

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# Management Team

Lisa Conte Founder, Chief Executive Officer & President	<ul> <li>25+ years of industry experience</li> <li>Obtained first anti-secretory human product FDA approval</li> </ul>
Karen Wright Chief Financial Officer	<ul> <li>30+ years of financial experience with biotech companies</li> <li>Former head of finance for Clene Nanomedicine</li> </ul>
John Kallassy Chief Operating Officer	<ul> <li>Former CEO of Zargis Medical Corp., which developed and sold human cardiac diagnostic devices</li> <li>Former CFO of Speedus Corp.</li> </ul>
Michael Guy, DVM, MS, PhD Vice President & Clinical Veterinarian	<ul> <li>20+ years of pharmaceutical R&amp;D experience</li> <li>Former Director of Morris Animal Foundation's</li> <li>Canine Lifetime Health Project</li> </ul>
Brett McKusick, DVM, MS, PhD Head of Regulatory Affairs	<ul> <li>20+ years of clinical and animal health R&amp;D experience</li> <li>Former Veterinary Medical Officer, FDA CVM</li> </ul>
<b>Steven King, Ph.D.</b> Executive Vice President, Ethnobotany & Supply	<ul> <li>22+ years experience surrounding supply of crofelemer</li> <li>Previously with Napo</li> </ul>
David Sesin Vice President, Project Management	<ul> <li>30+ years of chemistry-related experience in biotech fields</li> <li>Former Director of Chemistry at Bayer CropScience</li> </ul>
<b>Ian Parker</b> Vice President, Commercial Operations	<ul> <li>Longtime veteran of animal health industry</li> <li>Former sales &amp; marketing head for Bioniche Animal Health's US subsidiary</li> </ul>



#### **Board of Directors**

James Bochnowski Chairman	<ul> <li>Founder of Delphi Ventures, one of the first VC firms to focus exclusively on investing in life sciences companies</li> <li>Co-founded Technology Venture Investors</li> </ul>
Lisa Conte Founder, CEO & President	<ul> <li>25+ years of industry experience</li> <li>Obtained first anti-secretory human product FDA approval</li> </ul>
Jiahao Qiu Director	<ul> <li>Principal of BioVeda China Fund, a life science investment firm</li> <li>Extensive experience evaluating, managing &amp; investing in life science companies</li> </ul>
Zhi Yang, Ph.D. Director	<ul> <li>Chairman, Managing Partner and Founder of BioVeda China Fund</li> <li>Advisor to the China Health and Medical Development Foundation, under China's Ministry of Health</li> </ul>
Folkert Kamphuis Director	<ul> <li>Former Global Head of Strategic Planning at Novartis Animal Health</li> <li>20+ years in executive roles at Pfizer Animal Health/Pharmacia and Merial</li> </ul>



