



Parnell Investor Presentation

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PRESIDENT AND CHIEF EXECUTIVE OFFICER

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The Parnell Opportunity in Animal Healthcare:

Established Commercial Presence & Valuable Product Pipeline

5 Marketed Products; US Market Expansion Underway

Robust Pipeline with 7 Products in Development









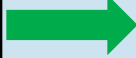

Integrated Development, Manufacturing & Commercial Capabilities

Unique Commercialization Model Utilizing Digital Technologies

Experienced Leadership in Global Animal Healthcare with Track Record

Products & Pipeline

Our Products & Pipeline

	Pilot Studies	Pivotal Studies	Anticipated Approval	Market Size
GONAbreed® & estroPLAN® (Fertility) – Cattle			Marketed (12 Countries)	\$200m
ZYDAX® (Osteoarthritis) – Dogs, Cats & Horses			Marketed (5 Countries; US/EU 2016)	\$400m
GLYDE™ (Osteoarthritis) – Dogs, Cats & Horses			Marketed (5 Countries)	\$500m
TERGIVE™ (Osteoarthritis) – Dogs			Marketed (1 Country)	\$400m
PAR121 (Orthopedics) – Dogs, Cats & Horses			2018	~\$200m
PAR122 (Dermatology) – Dogs & Cats			2018	~\$300m
PAR081 (Anesthesia) – Dogs & Cats			2017	\$120m
PAR101 (Diabetes & Laminitis) – Dogs & Horses			2017	~\$100m
GONADOPRO™ (Fertility) – Cattle			2018	\$200m
PAR061 (Mastitis) – Cattle			2019	\$400m

Production Animal Companion Animal

Positioned for rapid growth

Parnell's Business Strategy & Advantages

- Developed, registered, manufactured and commercialized Production and Companion Animal drugs in major markets
 - 2013 US launch of Estroplan, Gonabreed in Production Animal
 - 2015 US launch of Glyde in Companion Animal
- Existing, rapidly growing revenues competing against major multinational incumbents
 - Revenue growing 55% YTD Sept. 30
 - Expect to exceed \$13m in 2015 and more \$30m in 2016
- Successfully implemented an innovative commercialization strategy using Digital Technology
 - FETCH and mySYNCH proving to be highly competitive differentiators
- Major advantage of having Manufacturing in-house
 - Provides certainty of supply for our own products and now becoming a highly profitable source of additional revenue
- Attracting unique business development & licensing opportunities
 - Expect to complete two accretive in-licensing deals by year end

2015 Companion Animal Guidance Update

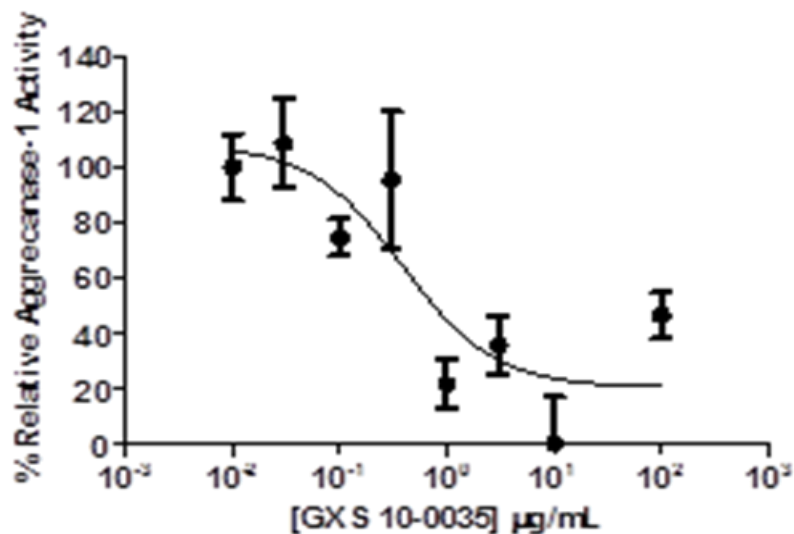
- **Bringing Zydax® & Glyde® to Large Markets**
 - Filed Zydax dossier with FDA Oct, 2015 (potential approval in Nov, 2016)
 - Expect to file in EU in Feb, 2016 (potential approval in Q4, 2016)
 - Launched Glyde and FETCH in USA Sep, 2015 (early trajectory is promising)
- **Establish US Canine Commercial Team**
 - Established a sales and marketing team of 55 covering 12,000 clinics
 - Expect to add in-licensed products to leverage this valuable investment
 - Provides twelve-month opportunity to pre-position Zydax in OA market
- **Considering options for launching Zydax & Glyde in non-US markets (e.g. EU, Asia, LATAM) including “own presence” vs. appointing a multinational Marketing Partner**
- **Reiterate expectation of significant global sales opportunity**
 - Unique positioning and market experience with Zydax provide confidence that Zydax will be a revolutionary therapeutic for the management of OA

ZYDAX[®]

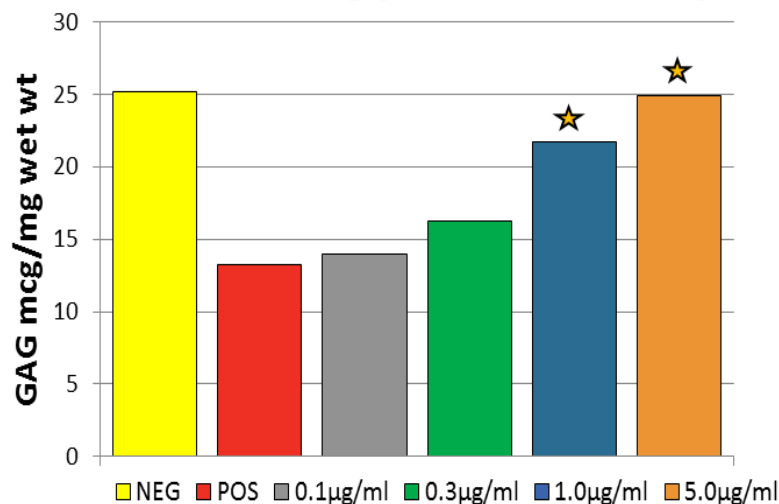
- a revolutionary OA treatment -

Zydax inhibits enzyme that degrades cartilage and increases cartilage production

- up-regulation of Aggrecanase-1 enzyme is the PRIMARY cause of degenerative joint disease, only ZYDAX substantially reduces the activity of this destructive enzyme
- Zydax quickly regenerates cartilage by significantly increasing the major component of cartilage; proteoglycans

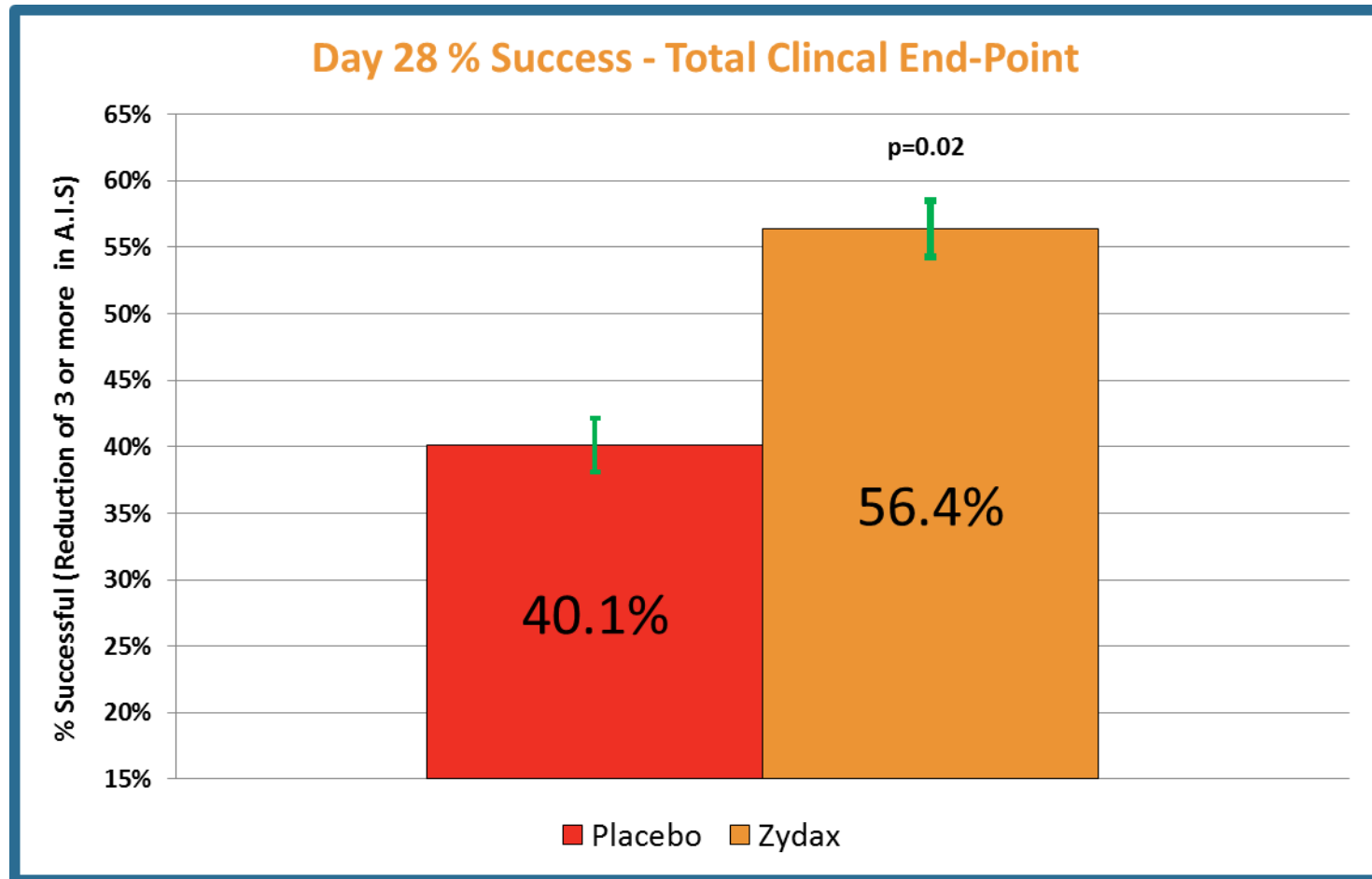


Tissue Proteoglycan Content - Day 21



Zydax Pivotal Efficacy Clinical Trial Outcomes

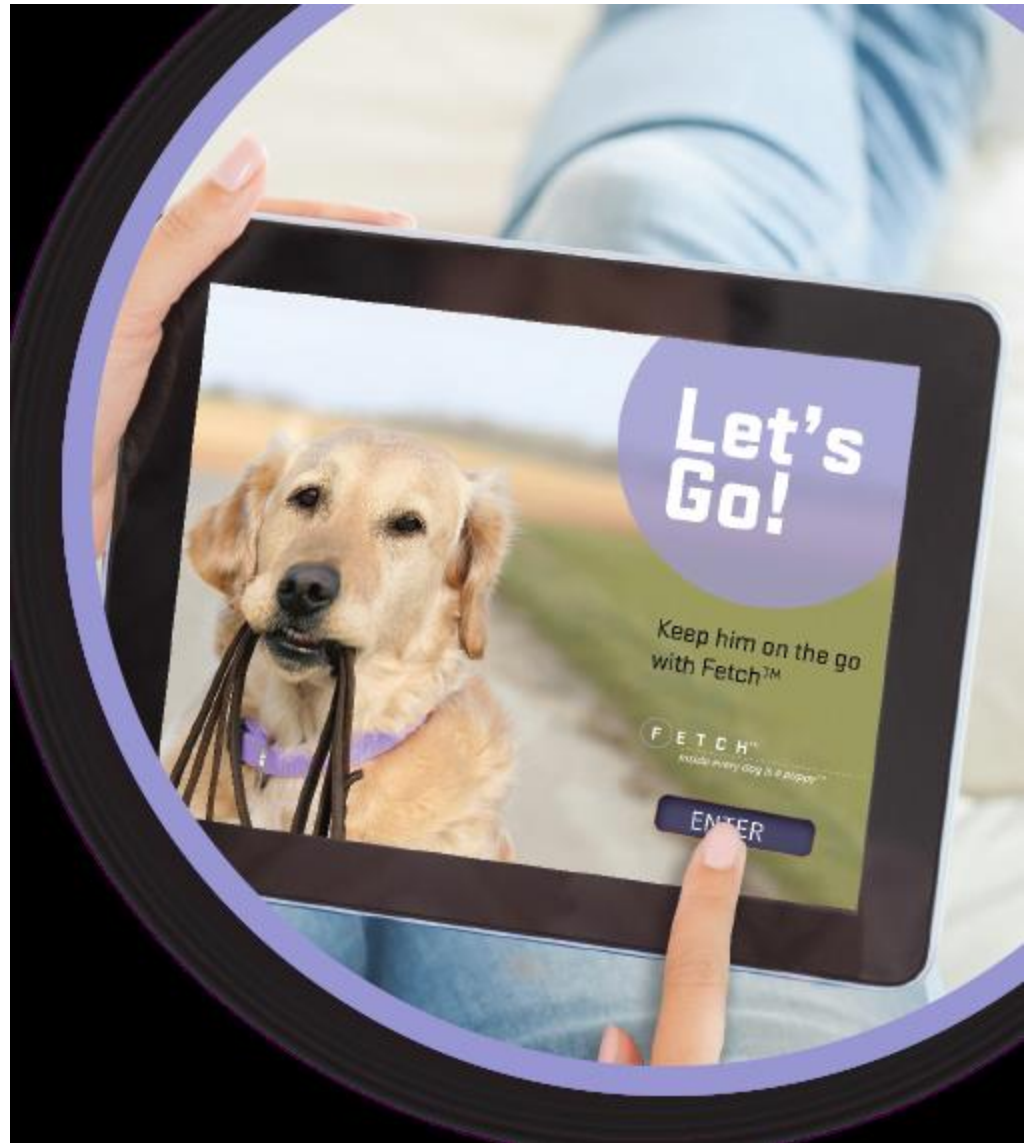
- Zydax significantly reduced the clinical signs of osteoarthritis after 4 injections as assessed by pet owners using a validated mobility scoring system



Digital Technology

FETCH

- App's fully developed by Parnell for veterinarians and pet parents
- Designed to significantly improve the diagnostics leakage that exists in OA
 - 40% of dogs in the US and EU have OA
 - Less than 5% are treated
 - No safe, proven long term therapies currently marketed
 - No one “owns” the share of mind of pet parents in the digital space



Nutraceuticals

GLYDE

- Nutraceutical market for osteoarthritis is currently larger than pharmaceuticals
- Significant growth in the overall supplements market mirroring growth in popularity of human products
- Glyde is uniquely positioned
 - Contains building blocks of cartilage (glycosaminoglycans)
 - Contains a unique natural anti-inflammatory
- Expect to leverage success of Glyde into other nutraceutical categories
 - Dermatology, Cardiology, Dental



2015 Production Animal Guidance Update

- **Triple digit sales growth in US Production Animal Business**
 - 7 territories in place, considering up to 3 more in 2016
 - Sales growing 283% with market share reaching 9% in September, 2015
- **mySYNCH[®] launched at AABP, September, 2015**
 - Expect digital technology assets to create significant differentiation and potential subscription service revenue streams in future
- **Expect to appoint Marketing Partner for Europe (and other geographies) with expected launch 2017**
- **Reiterate expected global peak sales opportunity for reproduction hormones of \$20m – \$30m**

Digital Technology

mySYNCH

- Enables Veterinarians and Dairy Producers to significantly improve breeding efficiency
 - Reproduction is the #1 cause of economic gain on a dairy farm
 - Significant opportunity to improve the implementation of breeding programs through better data management
 - Opportunity to use benchmarking to drive further improvements

YOU HAVE THE DATA, NOW YOU CAN SEE IT CLEARLY. WATCH MYSYNCH IN ACTION.

More about mySYNCH **mySYNCH** Smith Family Farm Type Free Stall Herd Size 510 PPI, Breed Holstein Friesian 60°F

Dashboard Reports Farm Profile Education Settings

Introduction Anatomy & Physiology The Estrous Cycle The Science of Breeding Programs Breeding Program Practice Optimizing Breeding Programs

Introduction

Inefficient management of reproduction is one of the largest sources of economic loss to the producer. By learning the fundamentals of reproduction programs and their precise implementation, producers can manage their herd more efficiently and maximize their profits.

Switch Languages

HD vimeo

2015 Contract Manufacturing Guidance Update

- Finalizing two major contract manufacturing deal with a large multinationals
 - Potential to expand scope of engagement
- These deals will leverage our current spare capacity (75%) and be highly profitable/accretive with multi-million dollar revenues

2015 R&D Pipeline Update:

- Advancing 7 Proprietary Pipeline Programs
- PAR121/122: UN Grant to develop infrastructure in the Cook Islands for extraction of starting substrate
- Zydax extensions: Feline & Equine
- Zydax Clinical Study investigating Durability of Effect and “Treatment to Success” for dogs with severe OA
- Significant number of in-licensing opportunities under consideration:
 - Expect to complete at multiple in-licensing transactions in 2016
 - Continue to focus on major companion animal markets
 - Drugs/Nutraceuticals/Med-Device

2015/16 Major Milestones and Catalysts

- Revenue growth (Annual Earnings; Feb 24, 2016)
- Glyde & FETCH launch in USA – early trajectory
- Zydax FDA filings update – first reviews due April, 2016
- Contract Manufacturing Update –Q1
- Business Development Update –Q1
 - Zydax Marketing Partner appointment update
 - Expectations for short-term product additions
 - Expectations for pipeline product additions
- R&D milestone updates
 - PAR121/122 development updates (proof of concept study outcomes)
 - Zydax Feline Target Animal Safety and Target Animal Efficacy
 - Zydax Equine Target Animal Safety and Target Animal Efficacy
 - Zydax Canine Durability of Effect study outcomes

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