



Jefferies 2014 Global Healthcare Conference

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PRESIDENT & CHIEF EXECUTIVE OFFICER

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The Parnell Opportunity in Animal Healthcare:

Established Commercial Presence & Valuable Product Pipeline

Five Marketed Products; US Market Expansion Underway

Robust Pipeline with Seven Products in Development

Integrated Development, Manufacturing & Commercial Capabilities

Unique Commercialization Model Utilizing Digital Technologies

Experienced Leadership in Global Animal Healthcare with Track Record

Our People

Executive Officers



Robert Joseph
Director, President and CEO



Brad McCarthy
Director and Chief Financial Officer



Matthew Musselman
Chief Commercial Officer



Robert Hunter
Chief Scientific Officer

Key Employees



Leonardo Avendano
Vice President, Manufacturing



Fenella Cochrane
Vice President, Clinical Science



Deborah Fitzgerald
Vice President, Global Sales

Proven Track Record

- Board & Management 150+ years of animal health and pharmaceutical industry experience
- Members of the management team have previously worked at global pharma/medtech companies including Eli Lilly, Allergan, Boehringer Ingelheim, Becton Dickinson

Our Business Strategy

- Parnell's strategy and advantages
 - Track-record of successful in-house drug development and commercialization in major markets
 - Existing revenues provide market experience and supplement the funding of drug development and commercial expansion
 - Impressive pipeline of unique drugs that will bring innovation to large, existing markets with unmet needs
 - Low cost drug development through in-house capabilities including manufacturing
 - History of astute capital management coupled with real-world experience in animal healthcare and proven customer insights

Strategy execution in 2015:

- **Bringing Zydax[®] to Large Markets**
 - Successful large-scale pilot efficacy study; pivotal study commenced
 - FDA approved safety section
 - CMC section nearing completion; successful manufacturing scale-up
 - Establish US commercial presence by leveraging experience in AU
- **Grow U.S. Hormone Sales and Markets**
 - Fully established commercial presence with 6 territories
 - Triple digit sales growth continuing
 - Opportunity to increase revenue growth through PROCEPT[®] and mySYNCH[®]
 - EU registrations and marketing partner appointments
- **Advancing 7 Proprietary Pipeline Programs**
 - Multiple clinical and preclinical studies with quick read-outs
 - Pipeline additions through in-house development and licensing

Our Products & Pipeline

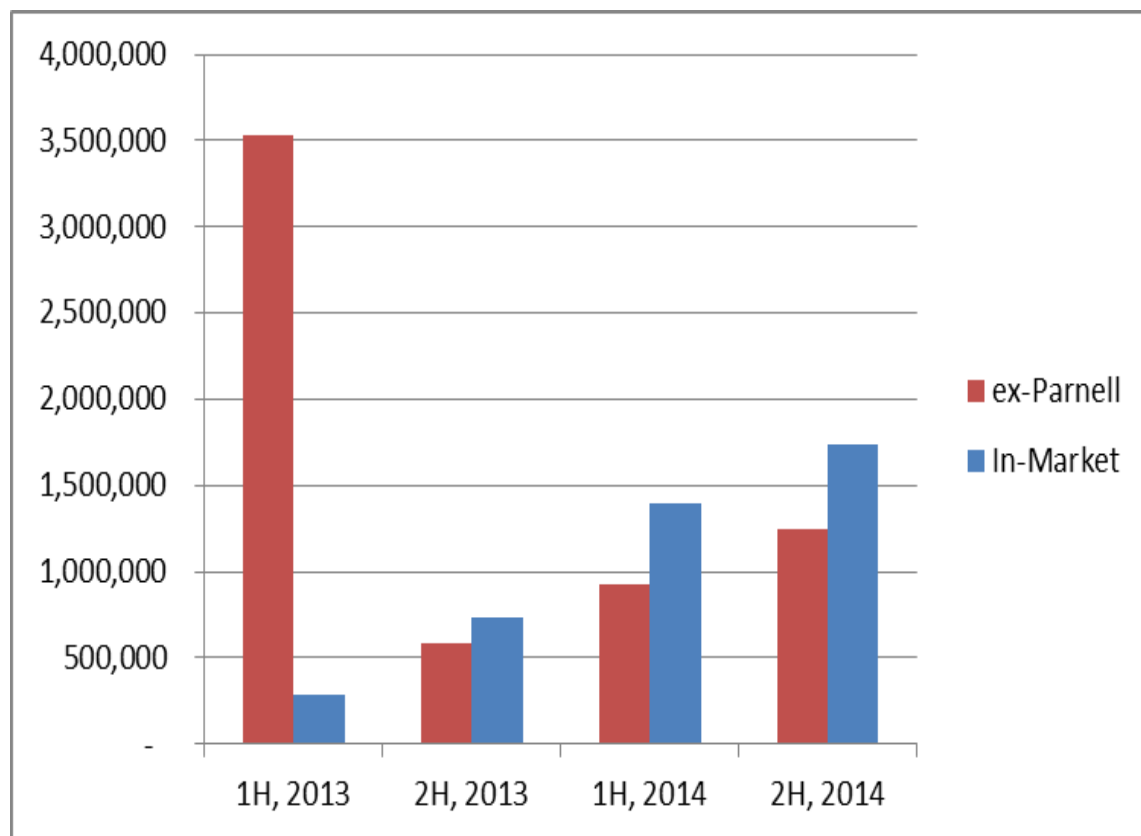
	Pilot Studies	Pivotal Studies	Anticipated Approval	Market Size
GONAbreed® & estroPLAN® (Fertility) – Cattle			Marketed (12 Countries)	\$200m
ZYDAX® (Osteoarthritis) – Dogs & Horses			Marketed (5 Countries; US/EU 2016)	\$400m
GLYDE™ (Osteoarthritis) – Dogs & Horses			Marketed (5 Countries)	\$500m
TERGIVE™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

Production Animal Companion Animal

2015 Outlook

Strong 'In-Market' Growth of U.S. Hormone Sales

- \$80M U.S. market
- In-market sales growing triple digits
- Market share 5.1% at June 2014 (up 2% from 2013), expect to rise closer to 10% in 2015
- Expect ex-Parnell sales to replicate in-market growth
- Leverage PROCEPT & mySYNCH in 2015 to differentiate from price discounting strategies of big-pharma



PROCEPT® - Driver of revenue growth for repro hormones

Patent pending breeding program developed with Key Opinion Leader; Dr Milo Wiltbank. Demonstrates our position as an innovative specialist repro company

Need

- Inadequate dairy farm reproductive programs are the single largest cause of economic loss

Solution

- PROCEPT increases conception rates by 10% which can significantly increase profitability
- Uses an additional injection of estroPLAN within conventional breeding program (ovsynch programs)
- Demonstrates Parnell's thought leadership and innovation and position us as specialist repro company



mySYNCH[®] - Driver of revenue growth for repro hormones

Unique digital technology for our dairy customers to manage repro programs more efficiently. Differentiates Parnell as a value-added service provider

The image displays three screenshots of the mySYNCH web application interface, illustrating its capabilities for reproductive management in dairy farming.

Left Screenshot: Dashboard Overview

- Navigation: Dashboard, Data, Reports.
- Chart: Line graph showing Insemination Rate % over Days in Milk (0 to 400). Legend: Target (red), Q2 2014 (blue), Q3 2014 (green).
- Messages: Three message items with titles and dates (08/08/2014).
- Statistics: A circular gauge showing a 28% Insemination Rate.
- Footer: mySYNCH logo.

Middle Screenshot: Detailed Reports

- Navigation: Dashboard, Data, Reports.
- Chart: Line graph showing Insemination Rate % over Days in Milk (0 to 400). Legend: Target (red), Q2 2014 (blue), Q3 2014 (green).
- Summary Cards: Four bar charts comparing Target, Q2 2014, and Q3 2014 performance. Values shown are 100, 35, and 55.
- Footer: mySYNCH logo.

Right Screenshot: Educational Content

- Navigation: Dashboard, Data, Reports, Plan, Tutorials.
- Video Player: A video titled "Fertilization" showing a cow in a field. Description: "Fertilization is the process of reproduction...".
- Progress Bar: A progress indicator showing 1 of 6 steps completed.
- Thumbnail Gallery: A row of six thumbnails representing different topics: Introduction, Anatomy & Physiology, The Estrous Cycle, The Science of Breeding Programs, Breeding Program Practice, and Optimizing Breeding Programs.
- Footer: mySYNCH logo.

Product Pipeline

Zydax[®]

“the best OA drug I have used in my 30 years of veterinary practice”

– Leading Australian Veterinary Surgeon

Need

- All current and potential drugs are ostensibly anti-inflammatories which fail to target the primary cause of OA – cartilage degradation

Solution

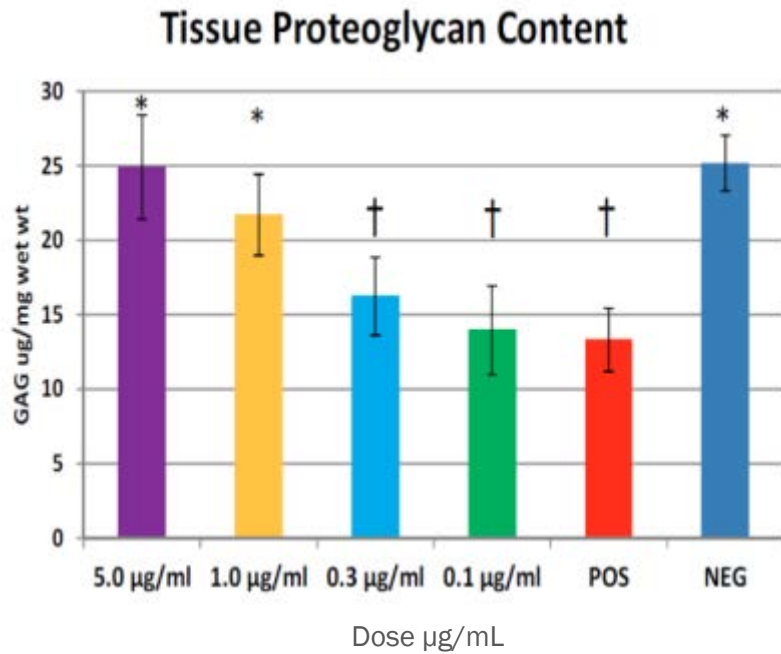
- Zydax is a highly sulfated polymeric drug with a proven bi-modal action
 - stimulates proteoglycan synthesis
 - inhibits Aggrecanase-1
- Only drug to have successfully completed FDA required “owner assessed, clinical end-point” efficacy trials



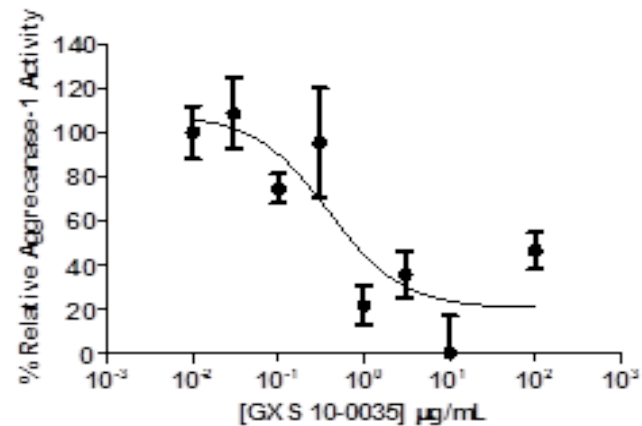
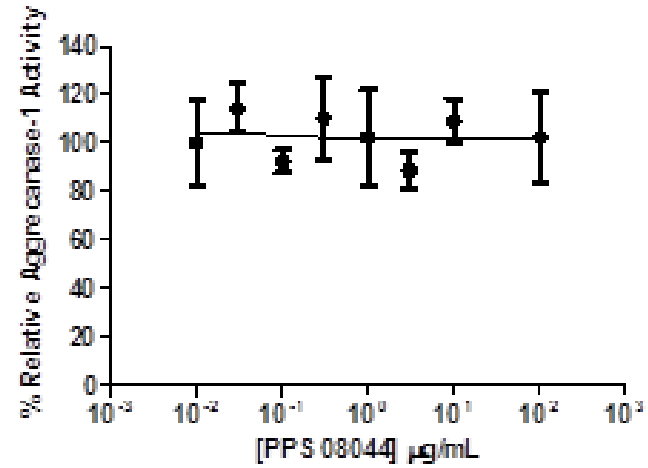
Zydax

- Mode of Action Studies

Anabolism

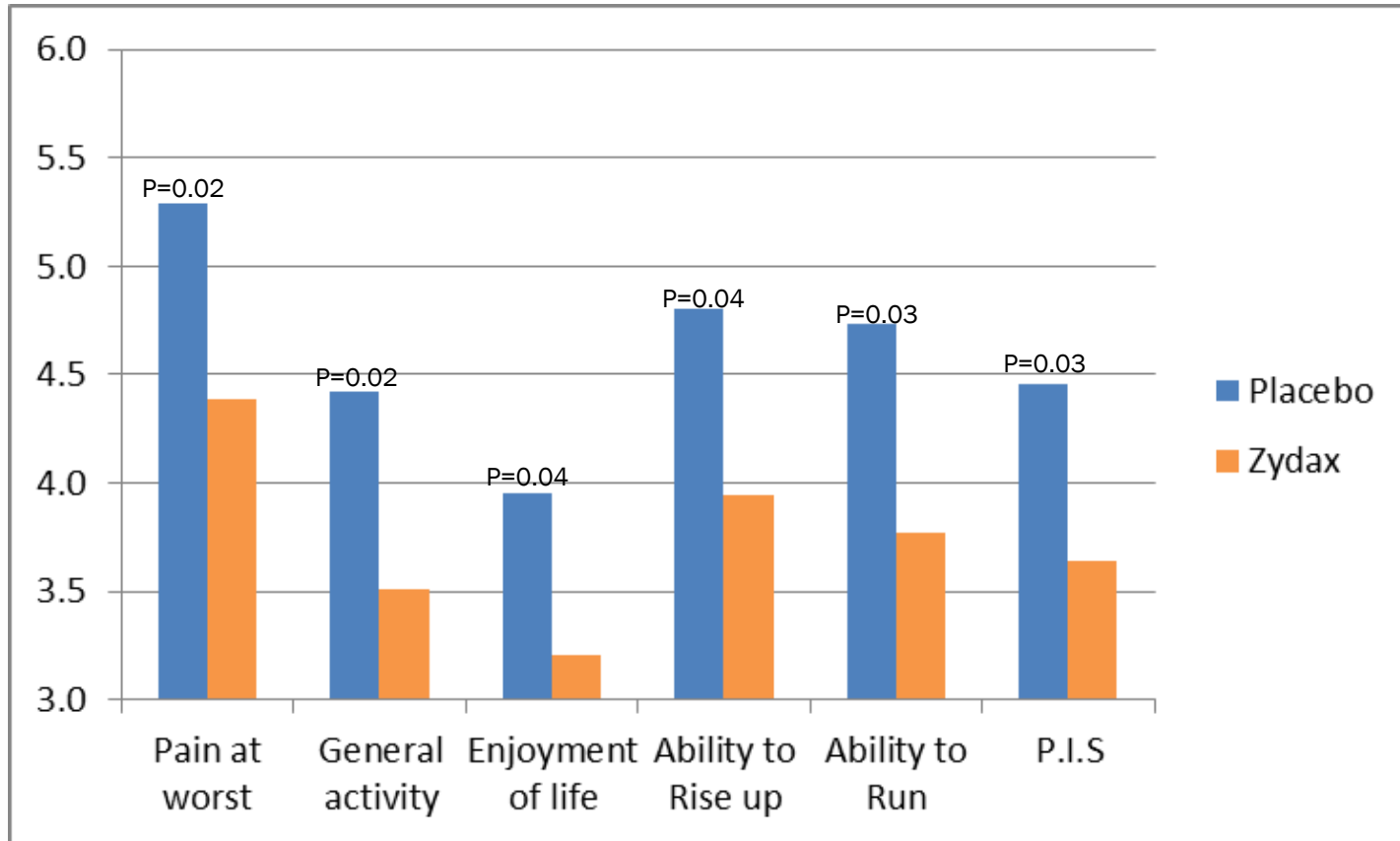


Catabolism



Zydax

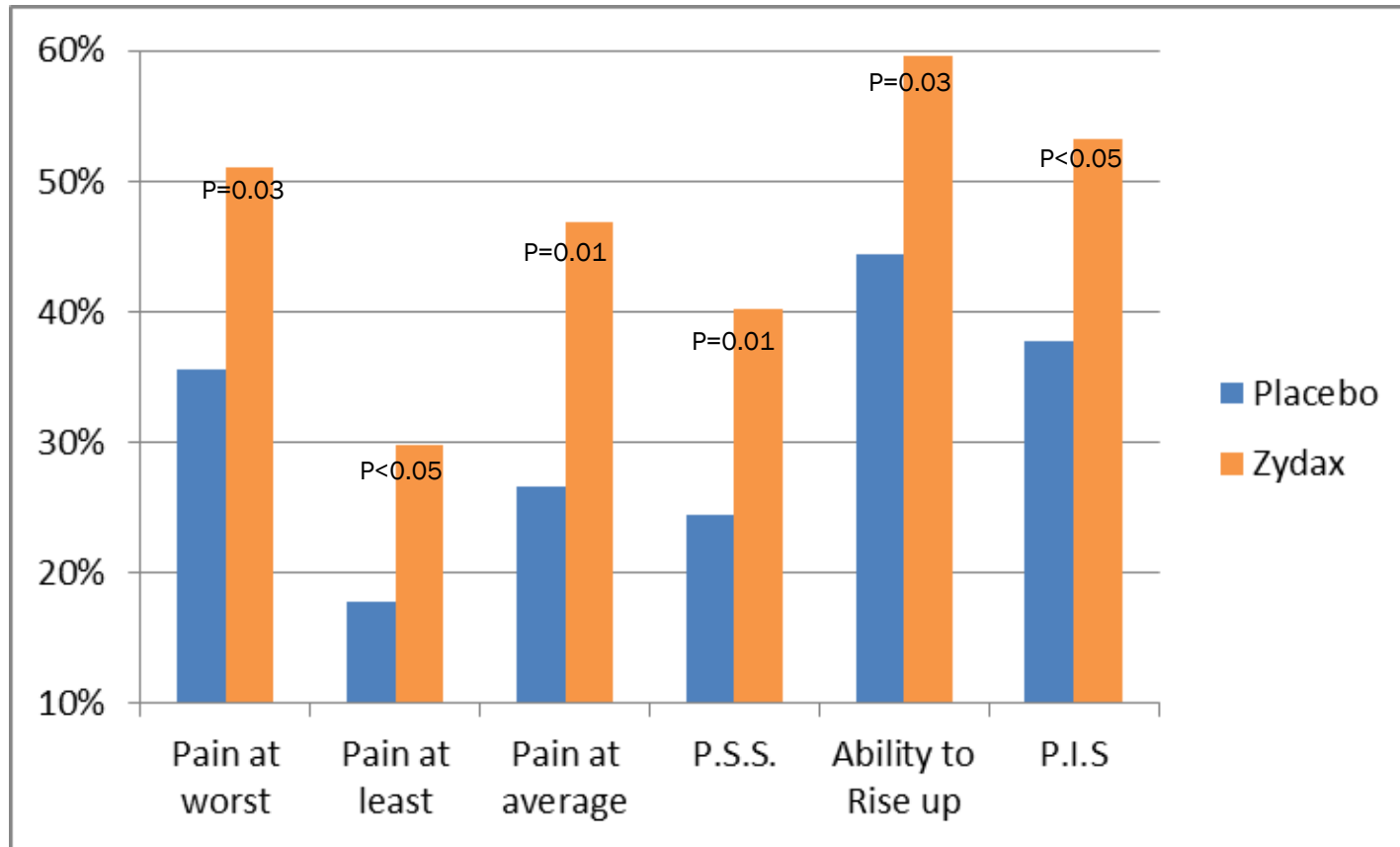
- Efficacy trial results: Difference in the Mean Scores between Groups after 28 days



Zydax improved average pain and activity impairment scores by 39% – 46%

Zydax

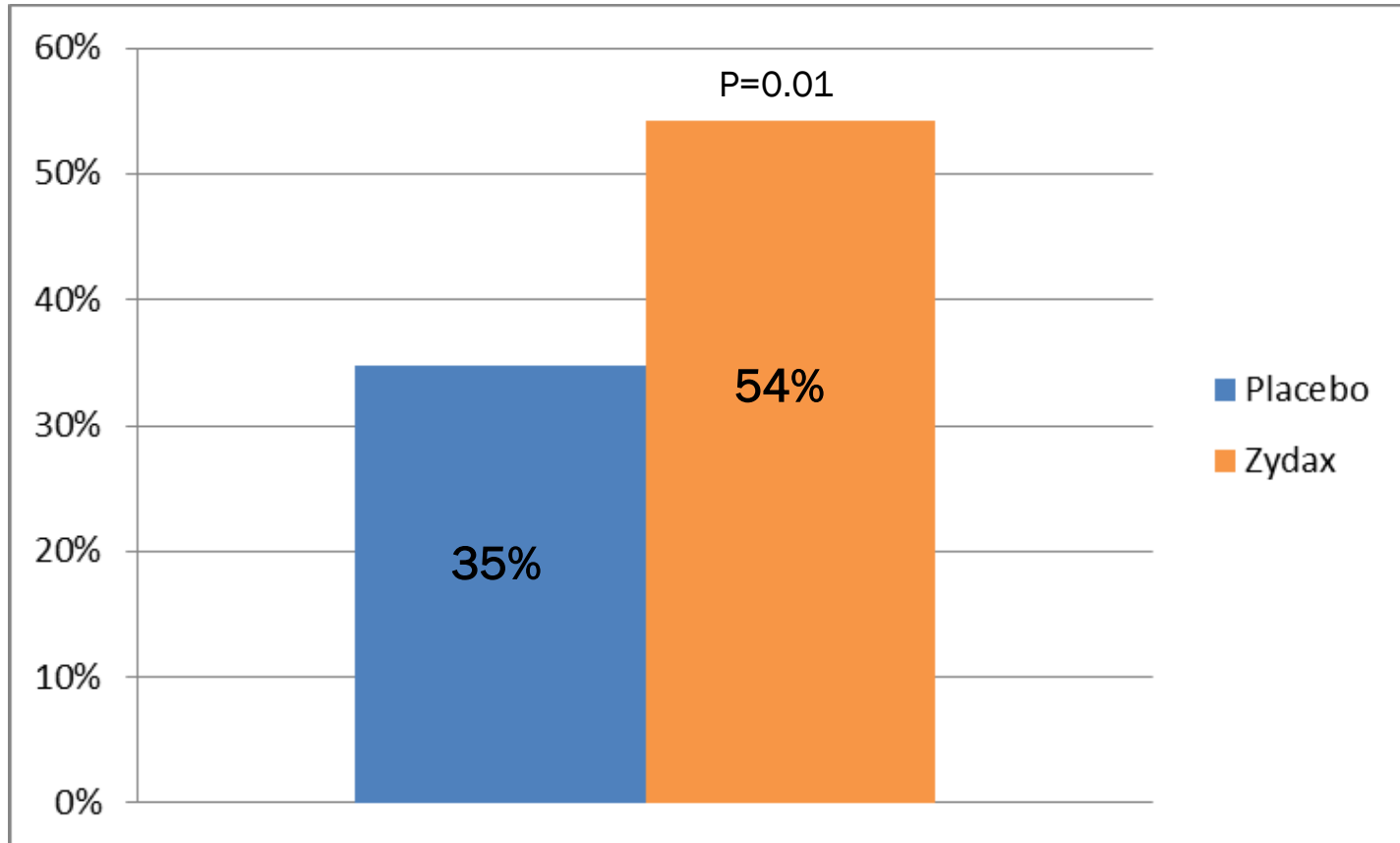
- Efficacy trial results: Percentage of Dogs that Reached Individual Clinical End Points



54% of Zydax treated dogs improved their total mobility score by more than 40%

Zydax

- Efficacy trial results: Percentage of dogs that TOTAL Clinical End Point



Milestones & Summary

		2014	2015	2016	2017
ZYDAX® (Osteoarthritis)	Dogs	Commence Pivotal Efficacy Trial, Q4	Submit All Data	Launch 1H: US & Europe	Launch 1H: Asia & Canada
	Horses		TAS	Efficacy	Launch 1H: EU & US , Asia

- Successful M.O.A. studies and more planned
- Safety section and label language FDA approved
- Pilot efficacy studies successful
- Pivotal efficacy study commenced in 24 trial sites in AU & USA
- Lonza successfully scaled up commercial manufacture of API
- Long patent remaining (2028) with opportunities for further IP
- Significant market success in comparable markets against NSAIDs, DMOADs and Nutraceuticals
- Final EU and US submissions Q2, 2015 with launch expected in Q1, 2016
- Equine approvals will be pursued in 2015/16
- Potential to add feline indications in 2015

PAR121 – Orthopedics

Market Need

- Dogs, and especially horses, do not tolerate casts or prolonged immobilization
- Multi-billion dollar canine orthopedic surgery market; in majority of equine cases, animal is euthanized

Solution

- PAR121 stimulates osteoblast differentiation to rapidly speed bone healing 1-week after fracture or orthopedic surgery

Milestones

- 2015: Formulation development
- 2016: Pilot efficacy read out



PAR122 – Dermatology

Market Need

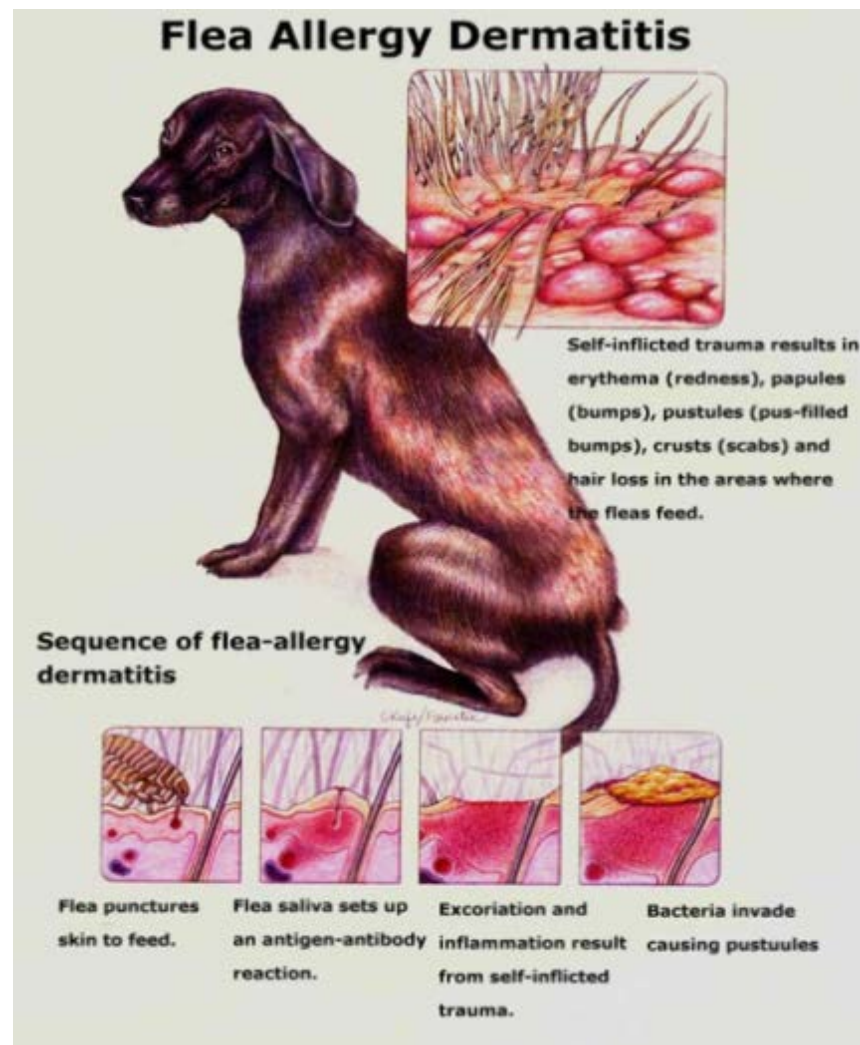
- Flea Allergy Dermatitis (“FAD”) is the biggest cause of atopic dermatitis
- New Anti-pruritic medications will reduce itching but there is no effective treatment for the secondary problem of bacterial skin infection

Solution

- PAR122 is a first-in-class product that stimulates rapid epithelial cell differentiation to speed skin healing

Milestones

- 2015: Formulation development
- 2016: Pilot efficacy read out



PAR061 – Mastitis

Market Need

- Current dry cow mastitis therapies require infusion of antibiotic paste directly into the teats of the udder
 - Process is cumbersome and laborious

Solution

- PAR061 is a pro-drug that crosses the blood-milk barrier and remains active for a prolonged period using an ion-trap via a simple subcutaneous injection
- Revolutionizes dry cow therapy

Milestones

- 2015: Formulation development
- 2016: Pilot efficacy read out



PAR081 – Anesthesia

Market Need

- Propofol is the most commonly used anesthetic; current propofol-based products have significant shortcomings
 - Emulsions are difficult to sterilize introducing high risk of bacterial infection

Solution

- PAR081 is a water soluble formulation
 - No risk of bacterial infection
 - More predictable anesthetic induction

Milestones

- 2015: Formulation development
- 2016: Pivotal efficacy & TAS



Move from this



To this

PAR101 – Laminitis

Market Need

- No effective therapy to prevent or reverse laminitis; emphasis on symptomatic treatments, diet restrictions and exercise

Solution

- PAR101 is a daily oral therapeutic utilizing pioglitazone (insulin-sensitizer for type 2 diabetes in humans)
- Only known product candidate in development targeting one of the major causes of laminitis, metabolic syndrome

Milestones

- 2015: Pilot efficacy
- 2016: Pivotal efficacy & TAS



GONADOPRO – Cattle Reproduction

Market Opportunity

- Reproduction is the single biggest driver of economic gain on a dairy farm
- Options to improve conception rates involve long duration and complex breeding programs

Solution

- Combination formulation of GnRH and Progesterone enables 10 day breeding program
- 30% improvement in conception rates
- overcomes challenges associated with intra-vaginal progesterone devices

Milestones

- 2015: In-vivo hormone profiles
- 2016: Pivotal efficacy



Opportunities for Expanding our Product Pipeline

- Our goal is to bring at least one new product to market each year commencing in 2015 through:
 - In-house drug development
 - Active in-licensing activities
- We expect to enhance our pipeline through quality:
 - large, established markets;
 - with significant un-met needs;
 - preferably an “improvement archetype”;
 - which provides; lower risk, lower cost of development, faster path to market and lower cost of commercialization.

- **Therapeutic Targets**
 - Osteoarthritis
 - Orthopedics
 - Laminitis
 - Skin diseases (Atopic dermatitis)
 - Wound healing
 - Cancer
 - Obesity
 - Reproduction
 - Protein production efficiency

Product Portfolio Milestones

multiple value inflections in 2015

	2014	2015	2016	2017
GONAbreed® & estroPLAN® (Fertility) – Cows	mySYNCH® PROCEPT®	EU Launch Q4	China Launch Q4	
ZYDAX® (Osteoarthritis)	Dogs	Commence Pivotal Efficacy Trial, Q3	Submit All Data	Launch 1H: US & Europe in 1H
	Horses		TAS	Launch 1H: EU & US , Asia
GLYDE® (Osteoarthritis) – Dogs & Horses	Glyde Chews Launch Q4	Launch 2H : US		
TERGIVE® (Osteoarthritis) – Dogs		Submit U.S dossier	Launch 2H : US	
PAR121 (Orthopedics) – Dogs, Cats, Horses		MOA & CMC	Pilot Efficacy	TAS & Efficacy
PAR122 (Dermatology) – Dogs		MOA & CMC	Pilot Efficacy	TAS & Efficacy
PAR081 (Anesthesia) – Dogs & Cats		CMC	TAS & Efficacy	Launch
PAR101 (Diabetes & Laminitis) – Horses		Pilot Efficacy	TAS & Efficacy	Launch
GONADOPRO® (Fertility) – Cattle		In vivo hormone trials	Pivotal Efficacy	Launch
PAR061 (Mastitis) – Cattle		CMC	Pilot Efficacy	Toxicology

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