# Parnell Investor Presentation

## September 29, 2015

## Ladenburg Thalman Conference

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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

# 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 growth from $8m in 2014 to ~$12m in 2015 and potential to double again in 2016 (without Zydax)
- 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

# 2015 Companion Animal Guidance Update

- **Bringing Zydax® & Glyde® to Large Markets**
  - File Zydax in US and Europe in 2H, 2015 (potential launch in Oct, 2016)
  - Launched Glyde and FETCH in USA Sep, 2015 (early trajectory is promising)
- **Establish US Canine Commercial Team**
  - Raised an $11m non-dilutive debt facility June, 2015
  - Establish sales team of 40 territory managers covering 12,000 clinics
- **Considering options for launching Zydax & Glyde in non-US markets including "own presence" vs. appointing a multinational Marketing Partner**
- **Reiterate expectation of significant global sales opportunity**
  - Depth of data package and market experience with Zydax provide confidence that Zydax will be uniquely positioned as a revolutionary therapeutic for the management of osteoarthritis in dogs

# 2015 Production Animal Guidance Update

- **Triple digit sales growth in US Production Animal Business**
  - 7 territories in place, considering up to 3 more by year-end 2015
  - Market share and sales growing above plan: 236% YOY growth YTD August 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) in 2015 with expected launch end-2016**
- **Reiterate expected global peak sales opportunity for reproduction hormones of $20m – $30m**

# 2015 Contract Manufacturing Guidance Update

- Close to agreeing terms on a contract manufacturing deal with a major multinational
  - Potential to expand scope of engagement
- Considering two other opportunities with other multi-nationals
- One or more of these deals will leverage our current spare capacity (75%) and be highly profitable/accretive with multi-million revenues

# 2015 R&D Pipeline Update:

- Advancing 7 Proprietary Pipeline Programs
- PAR121/122: UN Grant to develop infrastructure in the Cook Islands for starting substrate
- PAR081: work commenced with CRO on formulation development
- Zydax extensions: Feline & Equine and Canine Comparative Mode of Action studies
- 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 least one in-licensing transaction in 2H, 2015
  - Continue to focus on major companion animal markets
  - Drugs/Nutraceuticals/Med-Device

# 2015 Major Milestones and Catalysts

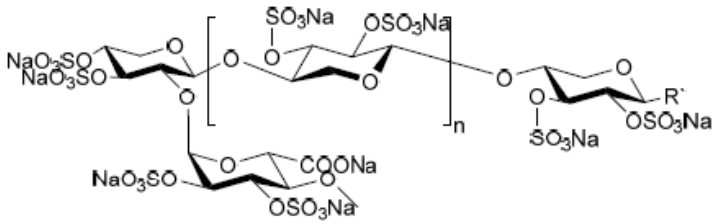
- Quarterly Investor Update: Oct, 2015
  - Revenue update
  - Glyde & FETCH launch in USA – early trajectory
  - Zydax FDA filings update
  - Contract Manufacturing Update
  - Business Development Update
    - Zydax Marketing Partner appointment update
    - Expectations for short-term product additions
    - Expectations for pipeline product additions
  - R&D milestone updates

# ZYDAX®

## *- a revolutionary OA treatment -*

# What makes Zydax® unique?

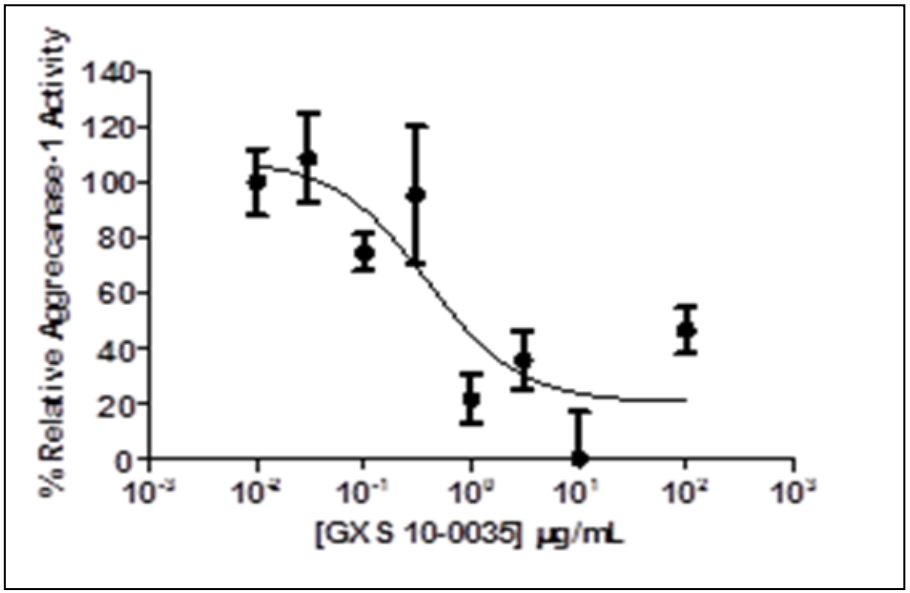
- 8-10 Xylan units that are each FULLY sulfated
- This leads to a UNIQUE structure that:
  - Inhibits Aggrecanase-1
  - Significantly increases Cartilage Proteoglycan content in 21 days
  - Significantly reduces Prostaglandin (pro-inflammatory) presence
  - Results in HIGHLY significant clinical outcomes
- Long-lasting patent (2028)
- Sold over 1 million doses in Australia

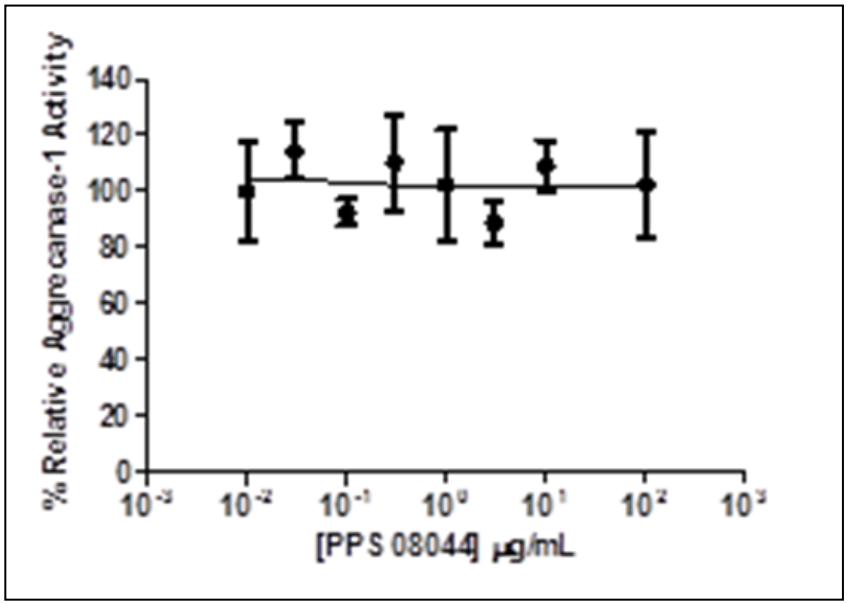



**PNL-001 (GXS)**
R`= $OSO_3Na$ or OH

# Only Zydax Inhibits Aggrecanase-1

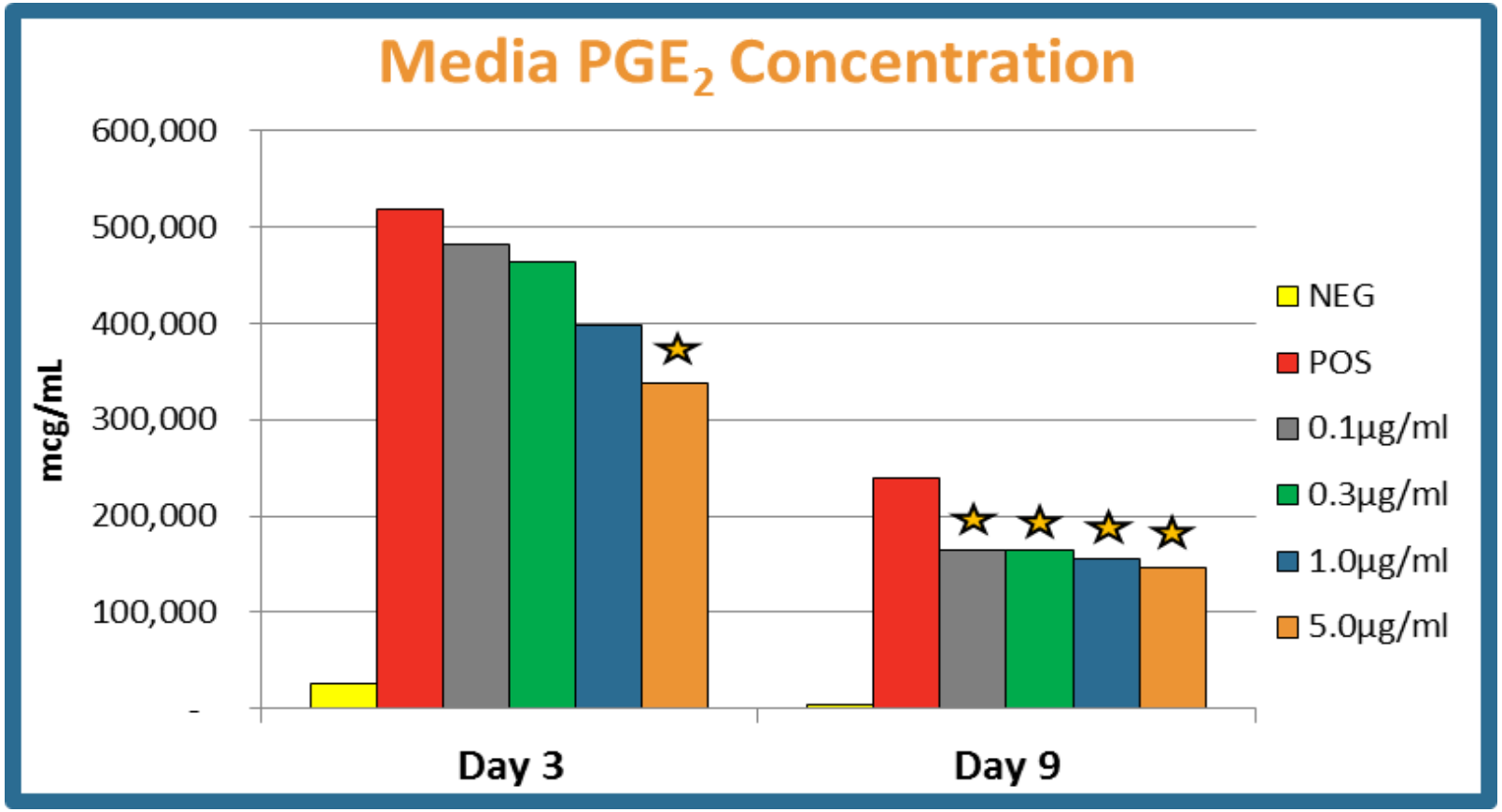
- It is well established the PRIMARY cause of degenerative joint disease is the up-regulation of Aggrecanase-1
- In a head-to-head study against PPS, only ZYDAX was able to substantially reduce the activity of the up-regulated destructive enzymes present in OA



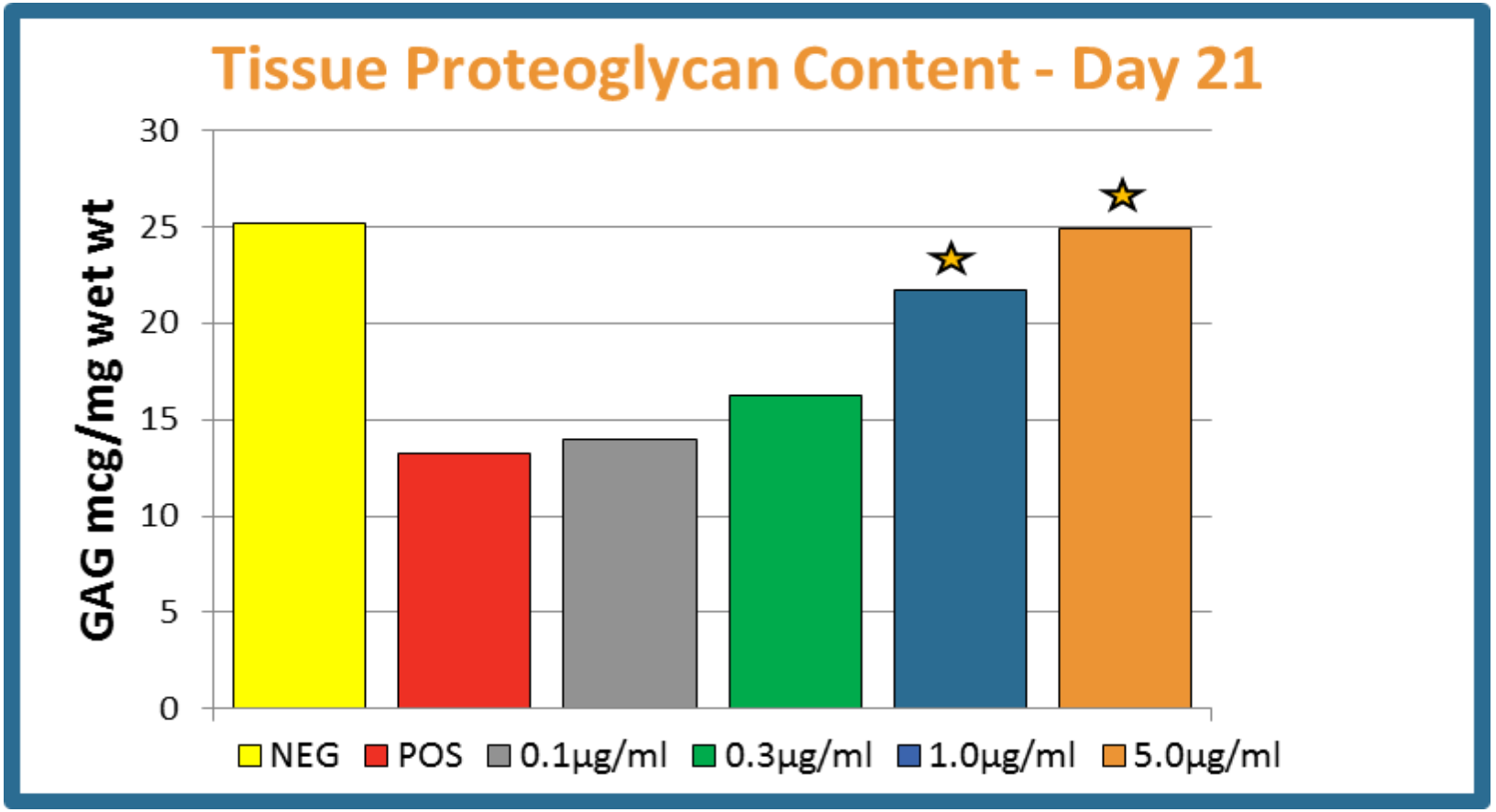
# Unique Mechanism of Action

- Displays anti-inflammatory activity by rapidly decreasing pro-inflammatory prostaglandins



# Unique Mechanism of Action

- Restores osteoarthritic cartilage to normal in 21 days by stimulating proteoglycan synthesis

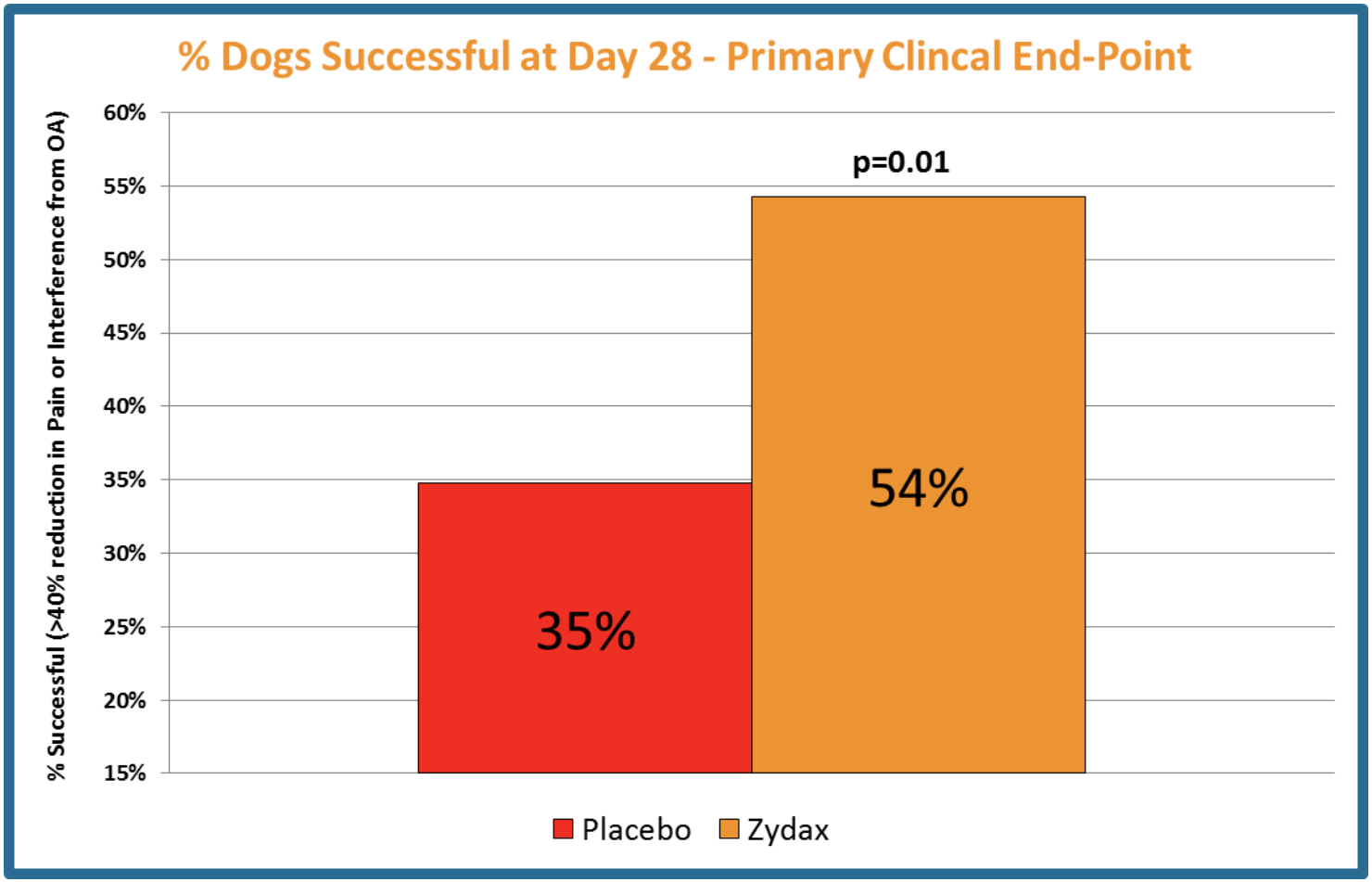


# ZYDAX®

## *- robust clinical data supports unique market positioning -*

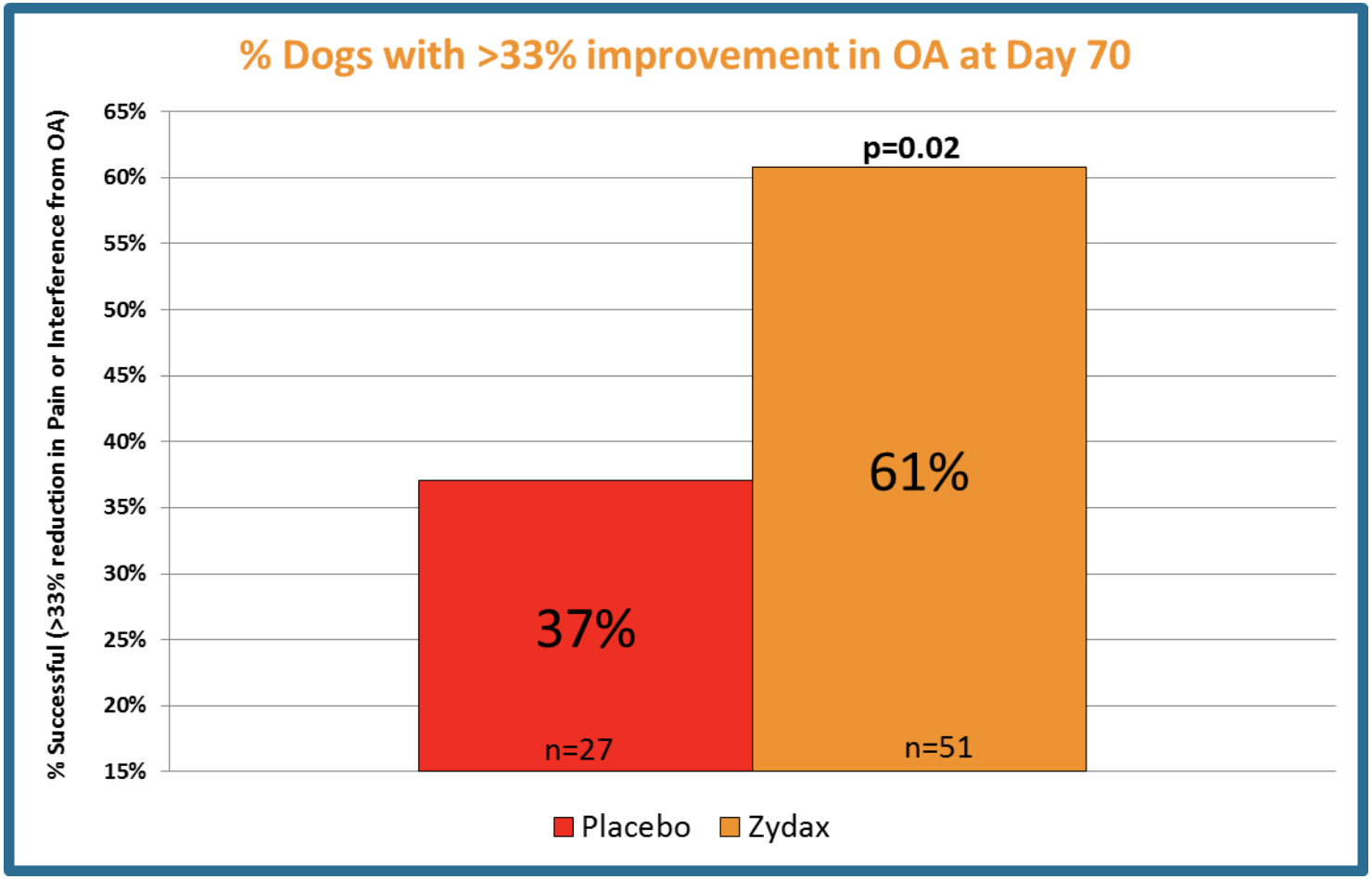
# Zydax PILOT Efficacy Clinical Trial Outcomes – Day 28

- Primary Clinical End Point - Percentage of dogs that had a >40% reduction in Pain or Interference caused by OA after 4 injections of Zydax (Day 28)



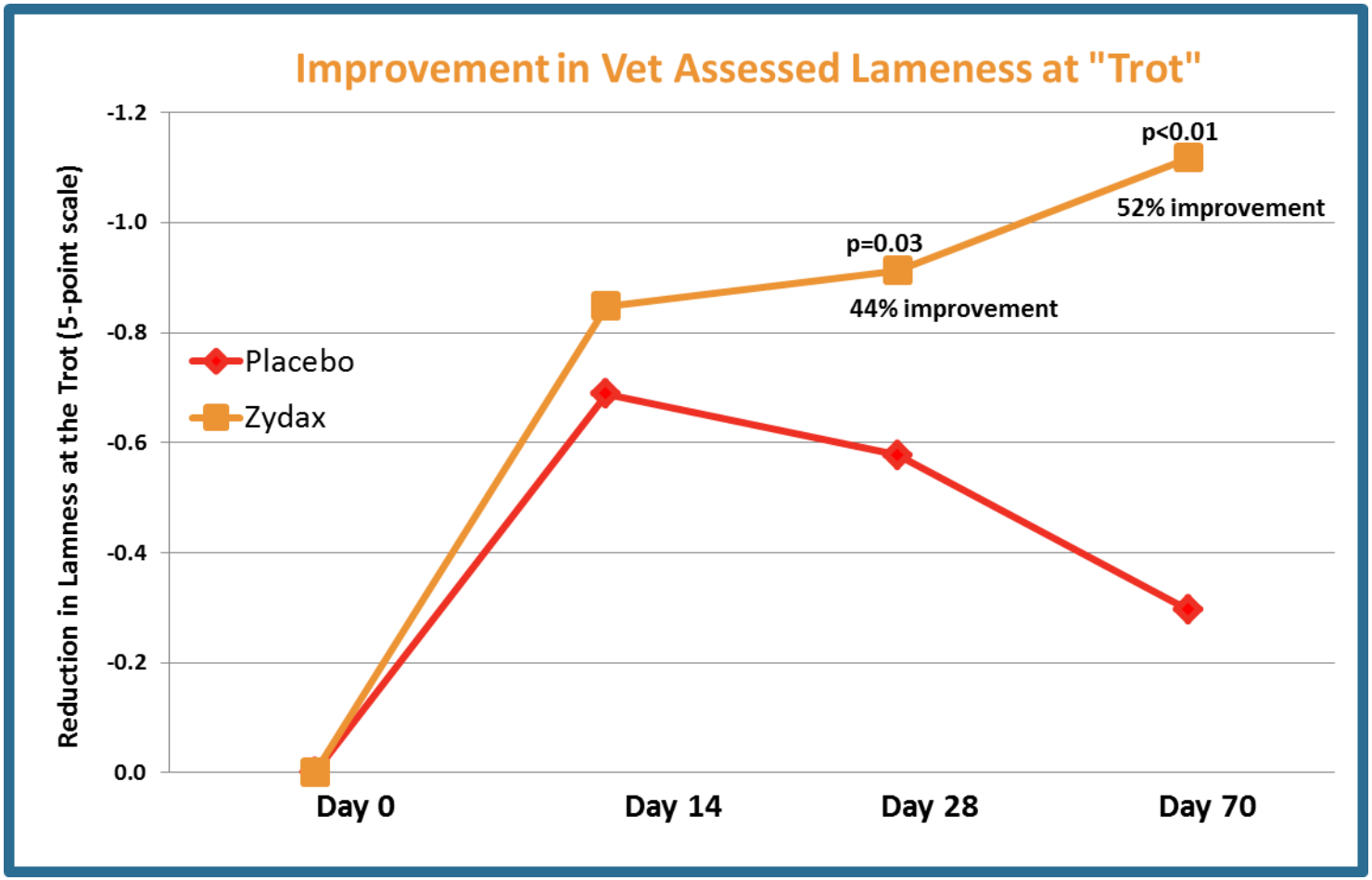
# Zydax PILOT Efficacy Clinical Trial Outcomes – Day 70

- Durability of Effect: 61% of Zydax treated dogs still had a >33% improvement in Pain or Interference 6 weeks after treatment with Zydax (Day 70).



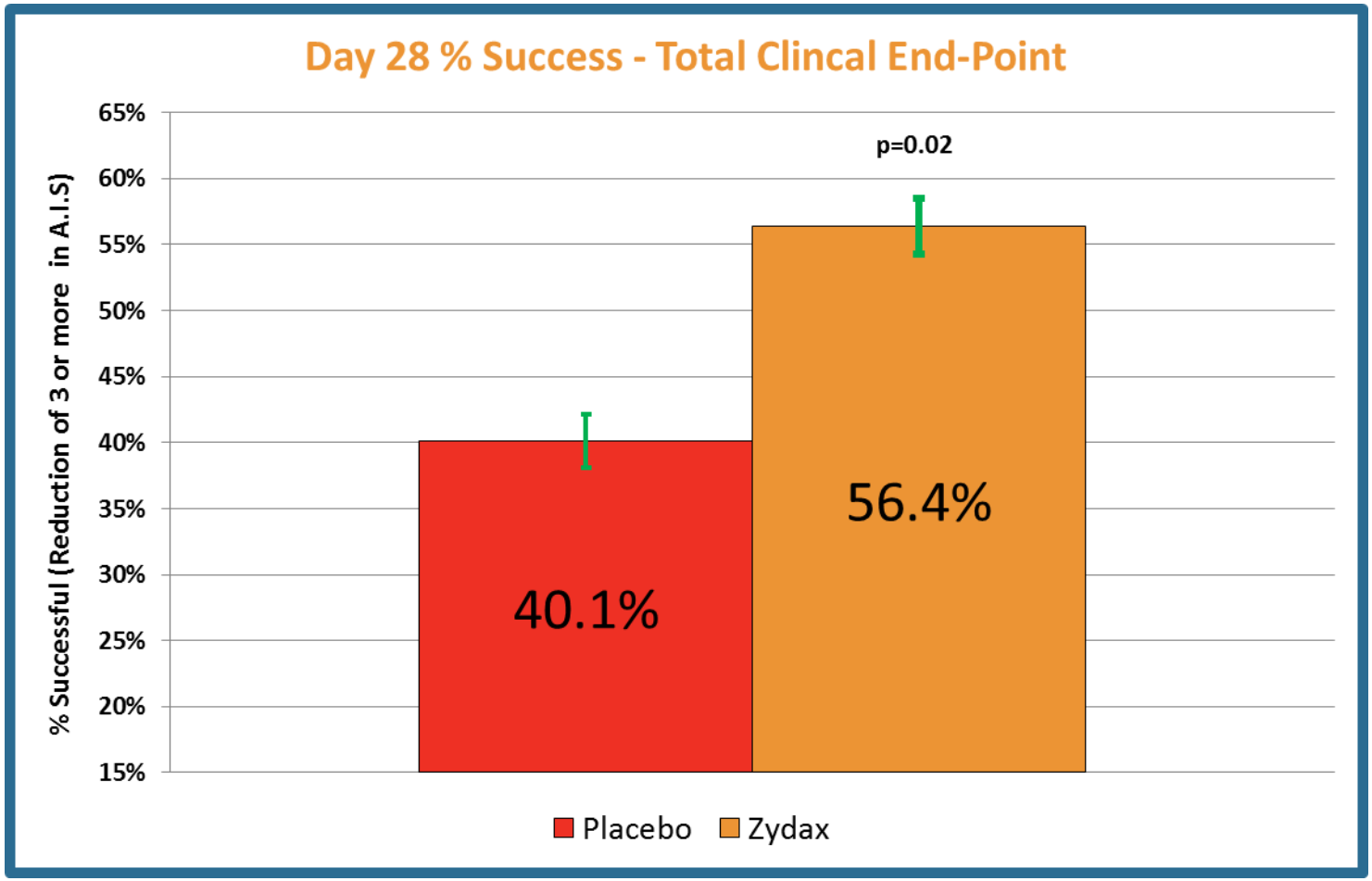
# Zydax PILOT Efficacy Clinical Trial Outcomes

- Veterinarian assessed lameness at the “Trot” demonstrating long-lasting benefits of Zydax



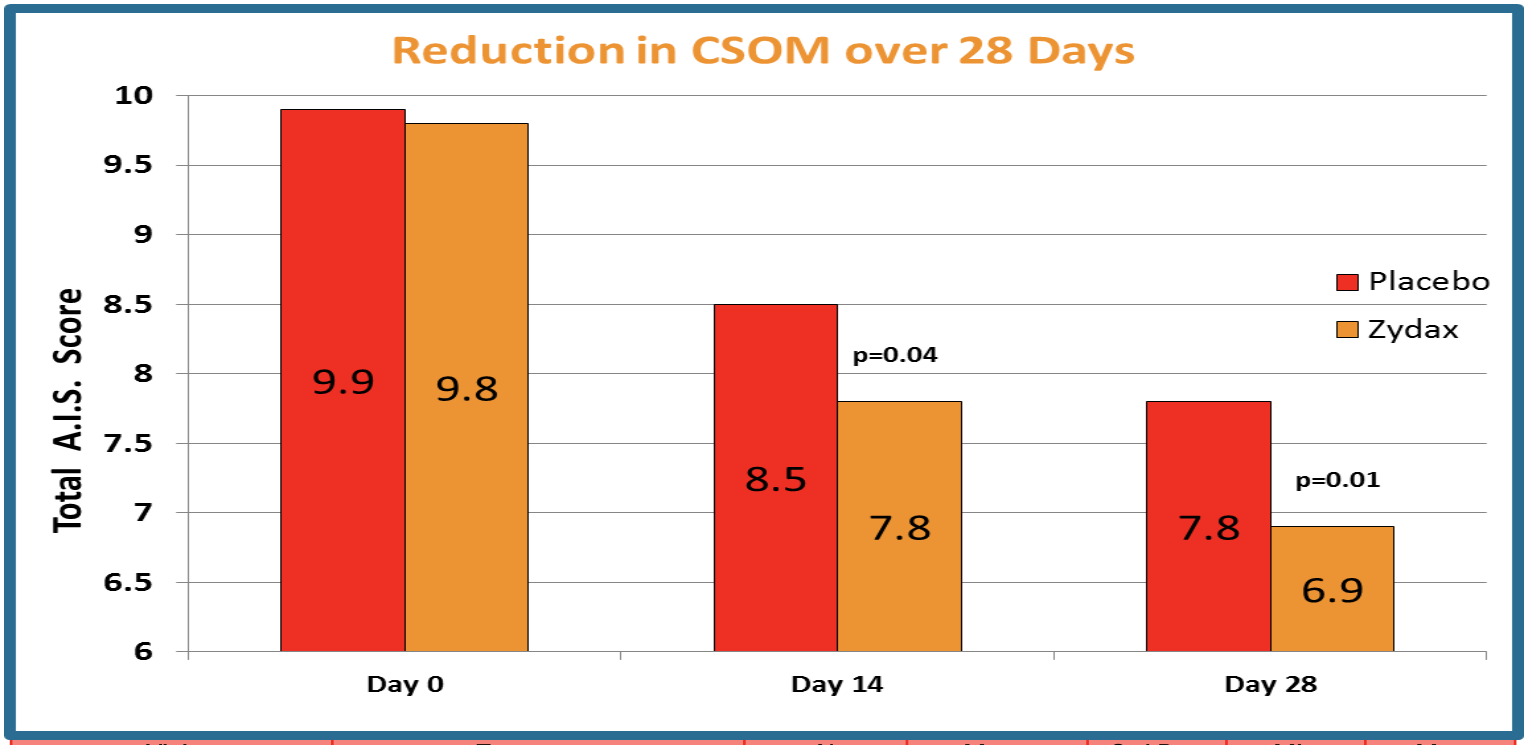
# Zydax Pivotal Efficacy Clinical Trial Outcomes

- Significantly more Zydax treated dogs had a reduction of 3 or more in the Activity Impairment Score after 28 days



# Zydax Pivotal Efficacy Clinical Trial Outcomes

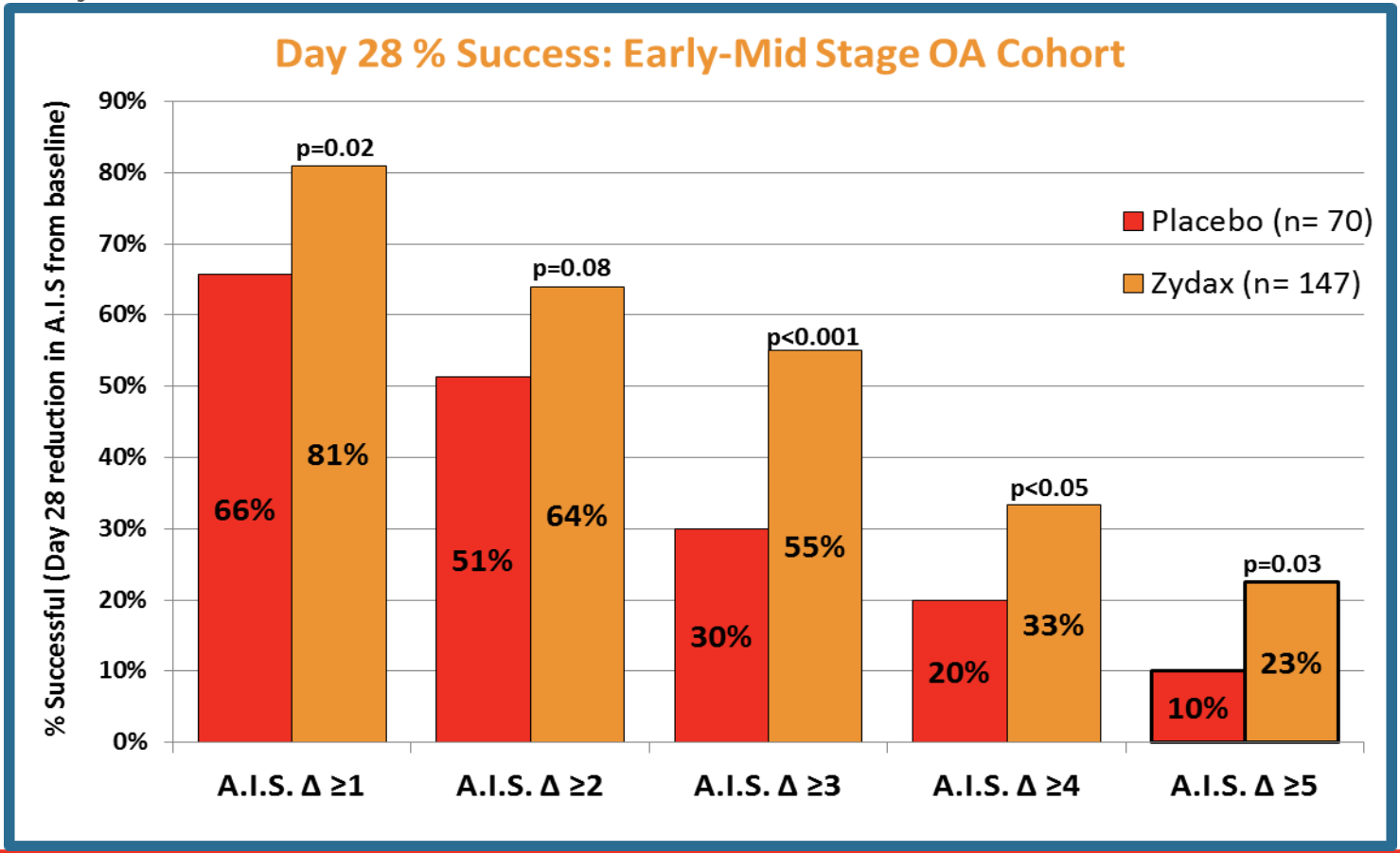
- Zydax Treated Dogs achieved a statistically superior improvement in Activity Impairment Score (AIS); 3 point reduction after 28 days and 2 points after 14 days




| Visit | Treatment | N | Mean | Std Dev | Min | Max |
|---|---|---|---|---|---|---|
| Day 0 | Placebo | 104 | 9.9 | 1.8 | 7 | 14 |
| | Zydax | 212 | 9.8 | 1.5 | 7 | 14 |
| Day 14 (+/- 2) | Placebo | 103 | 8.5 | 2.3 | 3 | 14 |
| | Zydax | 212 | 7.8 | 2.5 | 3 | 13 |
| Day 28 (+/- 2) | Placebo | 104 | 7.8 | 2.6 | 3 | 14 |
| | Zydax | 212 | 6.9 | 2.6 | 3 | 14 |

# Zydax Pivotal Efficacy Clinical Trial Outcomes

- Secondary Outcome: early to mid-stage (mild-moderate) cohort of dogs, Zydax demonstrated a significant improvement in clinical signs of OA; ranging from 81% of dogs showing at least an 11% improvement and 22% showing a 56% improvement at 28 days



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