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Citigroup's Global Healthcare Conference

John Plachetka – Chairman, President & CEO

May 24, 2007

Forward-Looking Statements

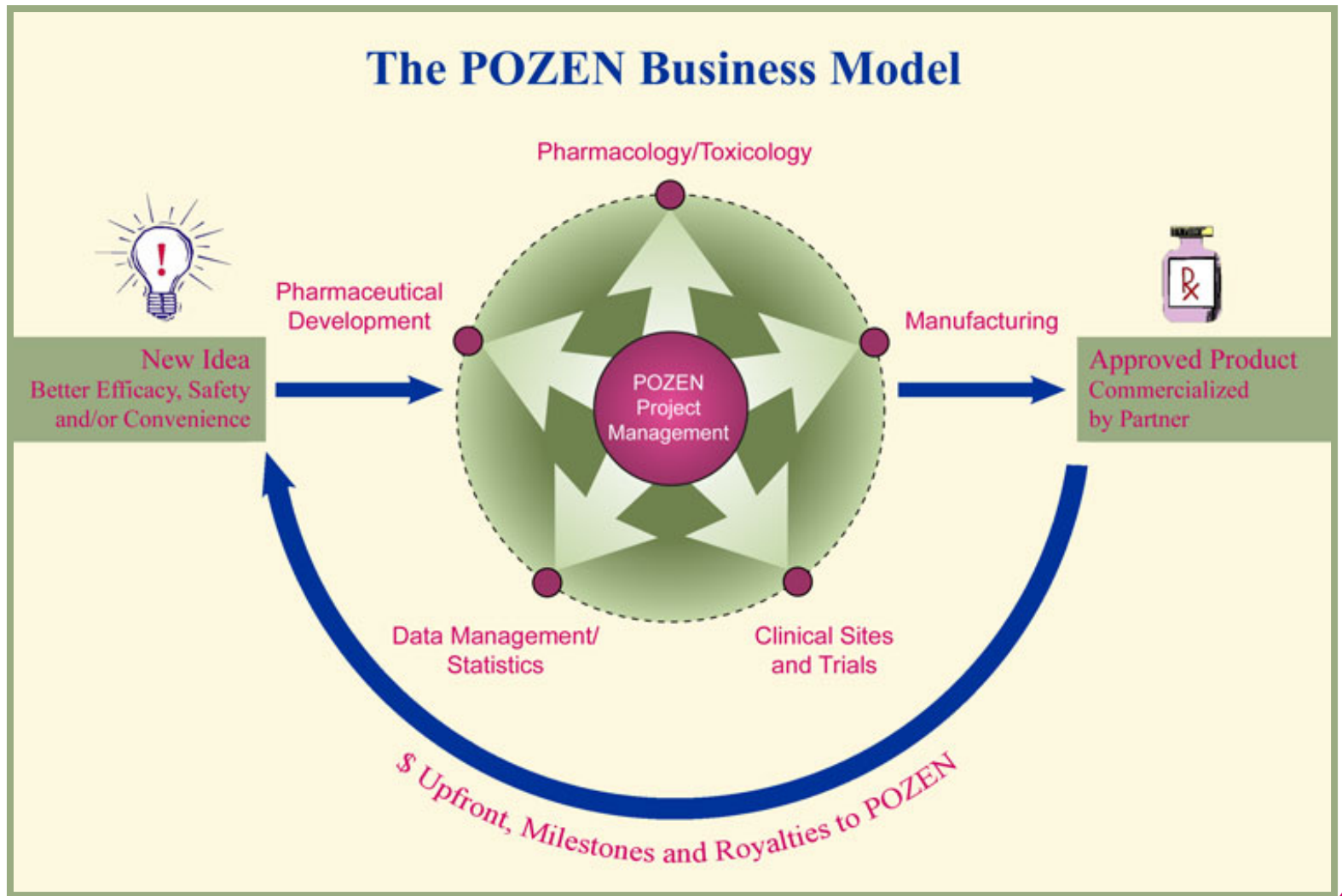
The following presentation includes “forward-looking statements” within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. You should be aware that our actual results could differ materially from those contained in the forward-looking statements, which are based on management’s current expectations and are subject to a number of risks and uncertainties, including, but not limited to, our failure to successfully commercialize our product candidates; costs and delays in the development and/or FDA approval of our product candidates, including as a result of the need to conduct additional studies, or the failure to obtain such approval or our failure to achieve milestones that would have provided us with revenue; the failure to obtain approval of our product candidates, including for reasons arising from, among other reasons, differences in the FDA's interpretation of the results of studies or trials from that of POZEN's and FDA's judgment that the benefits of the drug do not outweigh its risks; our inability to maintain or enter into, and the risks resulting from our dependence upon, collaboration or contractual arrangements necessary for the development, manufacture, commercialization, marketing, sales and distribution of any products; competitive factors; our inability to protect our patents or proprietary rights of others; general economic conditions; our failure to successfully commercialize our product candidates; the failure of any products to gain market acceptance; our inability to obtain any additional required financing; technological changes; government regulation; changes in industry practice; and one-time events, including those discussed herein and on our Form 10-Q for the period ended March 31, 2007. We do not intend to update any of these factors or to publicly announce the results of any revisions to these forward-looking statements.

POZEN Highlights

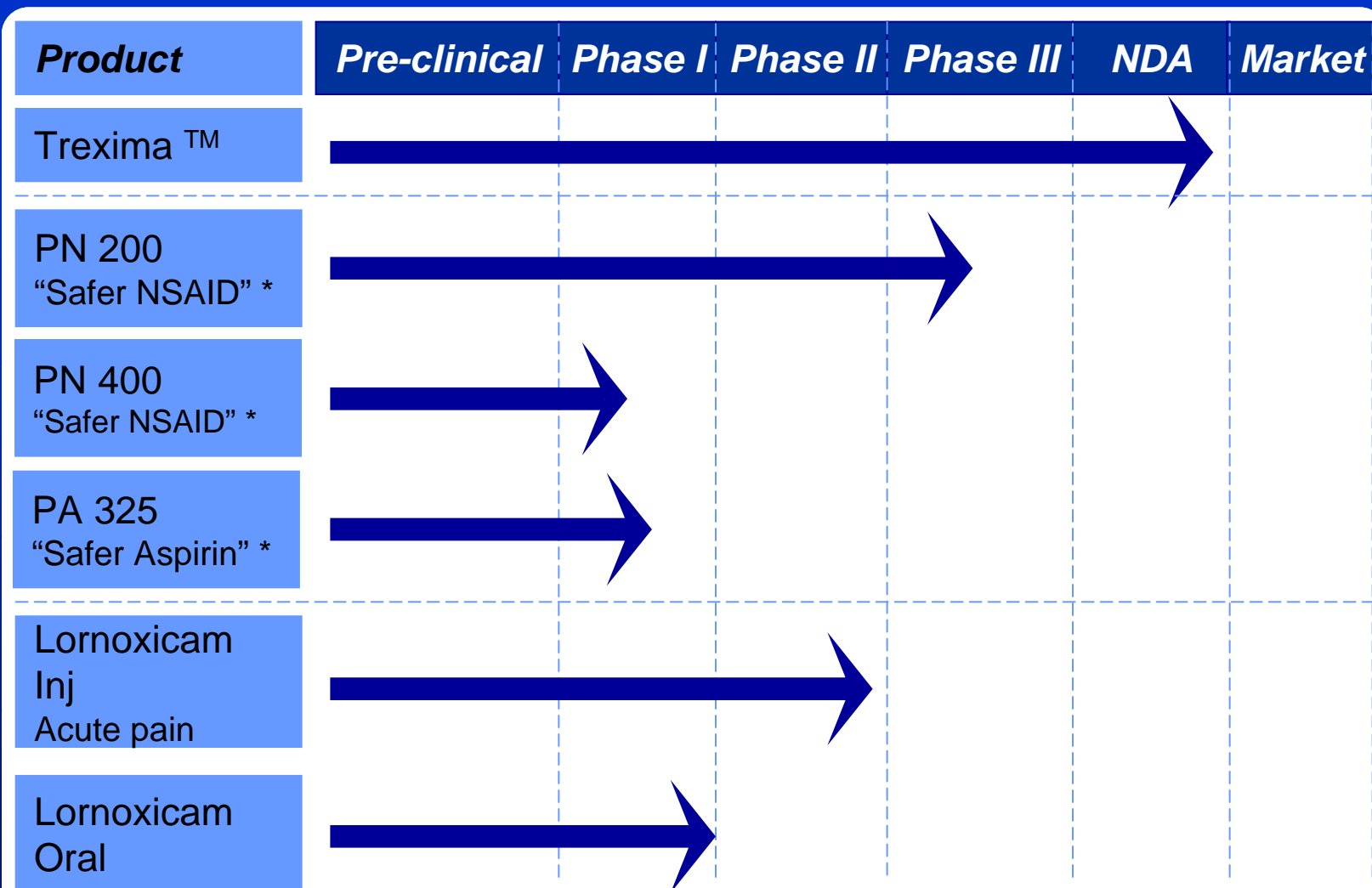
- **Trexima Approvable Letter received June 2006**
 - FDA determined Trexima effective; requested additional safety information
 - FDA accepted amended response – action letter anticipated August 1, 2007
 - GSK planning 2H 2007 launch
- **PN – “Safer” arthritis product**
 - Collaboration with AstraZeneca – \$375 million in upfront and milestone payments
 - PN 400 Phase III planned for Q3 2007
- **PA – “Safer” aspirin product**
 - Positive results in Proof of Concept study
 - FDA meeting scheduled for early July 2007
- **Efficient business model executed by experienced management team**
 - Low burn
 - High productivity

Strategic Outsourcing

The POZEN Business Model

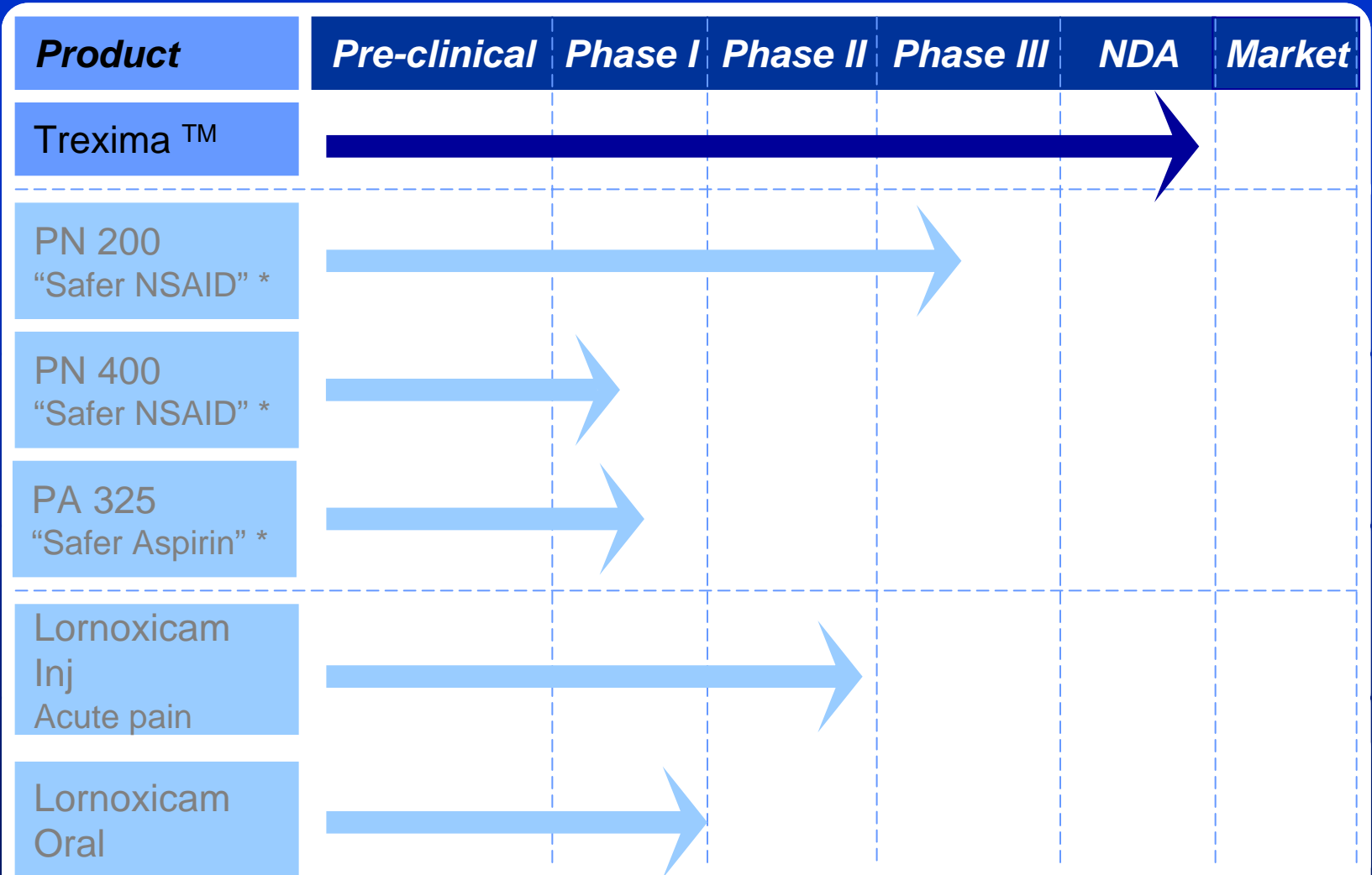


POZEN Product Pipeline Status



* Product expected to reduce ulcers vs. NSAID alone

POZEN Product Pipeline Status



* Product expected to reduce ulcers vs. NSAID alone

Trexima[™] : Next Generation Migraine Therapy

- Developed in collaboration with GSK
- First triptan-based product with multiple mechanisms of action
- Expected benefits of Trexima over triptan monotherapy
 - Faster onset of pain relief
 - Longer duration of action
 - Effective in more patients
 - Similar tolerance to triptan monotherapy
 - Superior benefit/risk profile
- Formulation utilizes GSK's proprietary RT Technology[™]

POZEN/GSK Deal Terms

- | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---|
| <ul style="list-style-type: none"> • Total Upfront And Milestone Payments | \$160 million | |
| <ul style="list-style-type: none"> <ul style="list-style-type: none"> • Upfront fee and milestone payment in 2003 | \$25 million | √ |
| <ul style="list-style-type: none"> <ul style="list-style-type: none"> • Initiation of Phase 3 program | \$15 million | √ |
| <ul style="list-style-type: none"> <ul style="list-style-type: none"> • Acceptance of NDA filing by FDA | \$20 million | √ |
| <ul style="list-style-type: none"> <ul style="list-style-type: none"> • NDA approval and GSK notification of “intent to commercialize” | \$20 million | |
| <ul style="list-style-type: none"> <ul style="list-style-type: none"> • Sales performance milestones based on achievement of certain sales thresholds | \$80 million | |
| <ul style="list-style-type: none"> • POZEN Will Receive Royalties Based On Sales | | |

Additional Trexima™ Data

- **GSK abstracts presented at AAN – May 2007**
 - Consistency – Within person, across 4 migraine attacks
 - Traditional and Non-Traditional Migraine-Associated Symptoms: Incidence and consistent responsiveness across 4 migraine attacks
 - Productivity – Assessing workplace and productivity and activity time in migraineurs
- **GSK abstracts presented at AHS – June 2006**
 - Efficacy and tolerability – Early Intervention – well tolerated and effectively relieves pain
 - Productivity and satisfaction – Early Intervention – reduced productivity loss and improved satisfaction
 - Long-term safety – Consistent and uniform clinical safety/tolerability profile over 12 months
 - Efficacy of combination over monotherapy – Superiority for standard endpoints and sustained efficacy
 - Long-term clinical and patient-reported benefits – Consistent relief of migraine attacks over 12 months

Additional Trexima[™] Data (Cont.)

- **GSK abstracts presented at Migraine Trust (London) – September 2006**
 - Blood Levels –Sumatriptan reached peak blood levels 53 minutes earlier with Trexima compared to Imitrex
 - Consistent Efficacy – Trexima delivered consistent efficacy over multiple migraine attacks
 - Early Intervention – Patients who treated their migraines with Trexima while pain was mild and within one hour of the start of pain were nearly twice as likely to be pain-free from 2 through 24 hours
- **Mayo Clinic Proceedings – January 2007**
 - 12-month safety study published
- **JAMA Article – April 2007**
 - NDA efficacy studies published

What GSK is Saying About Trexima™

The Next Generation Migraine Treatment!

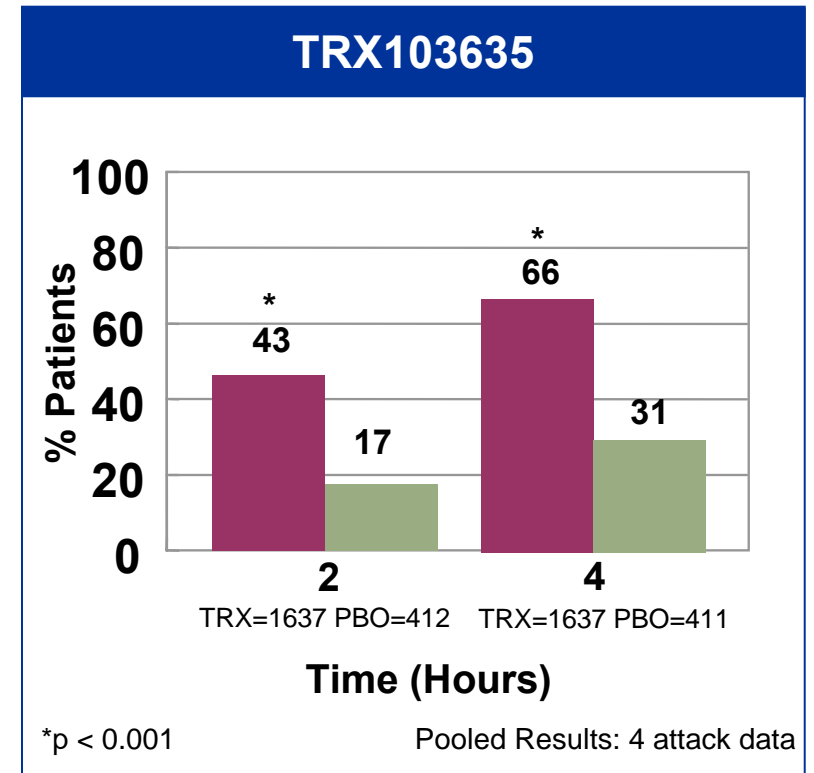
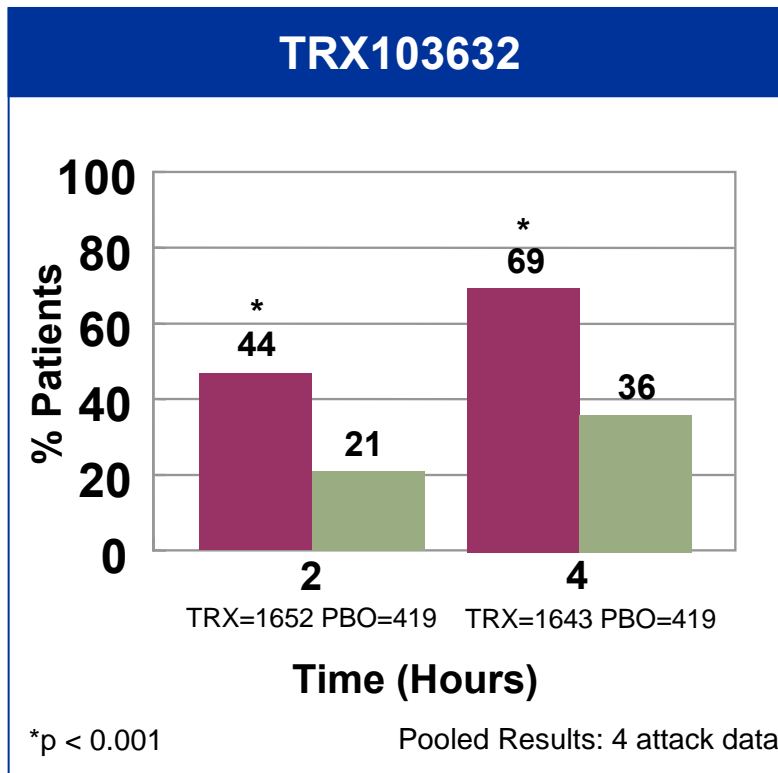
Trexima™
sumatriptan succinate/
naproxen sodium

- First and only therapy targeting multiple pathways that cause migraine pain
- Beat the Gold Standard head to head
- Opportunity to capture shares from all medications currently used to treat migraine

Trexima Delivers on Higher Hurdle: Migraine Free at 2 and 4 Hours

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New Data

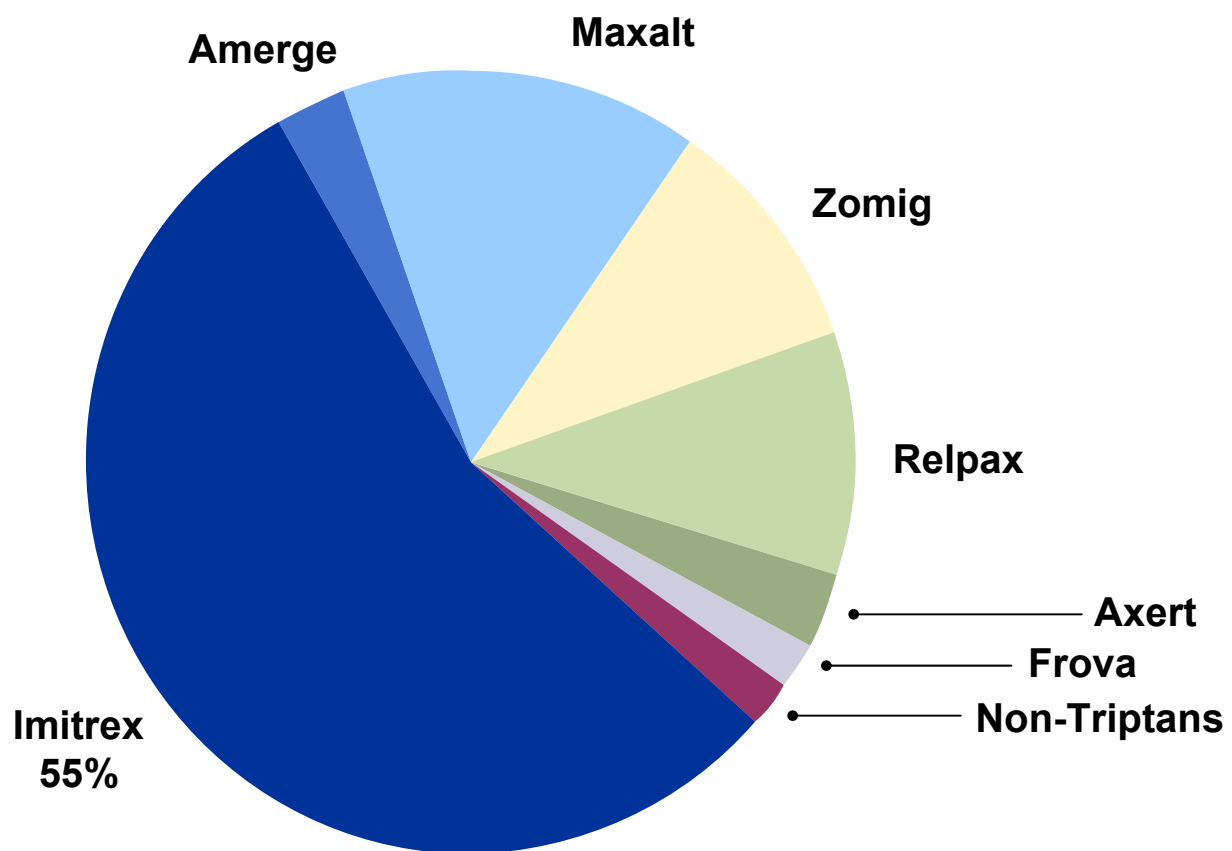


Migraine Free: free from headache pain, nausea, vomiting, photophobia, and phonophobia

Courtesy of GSK

■ Trexima
■ Placebo

\$2.2 Billion U.S. Migraine Market

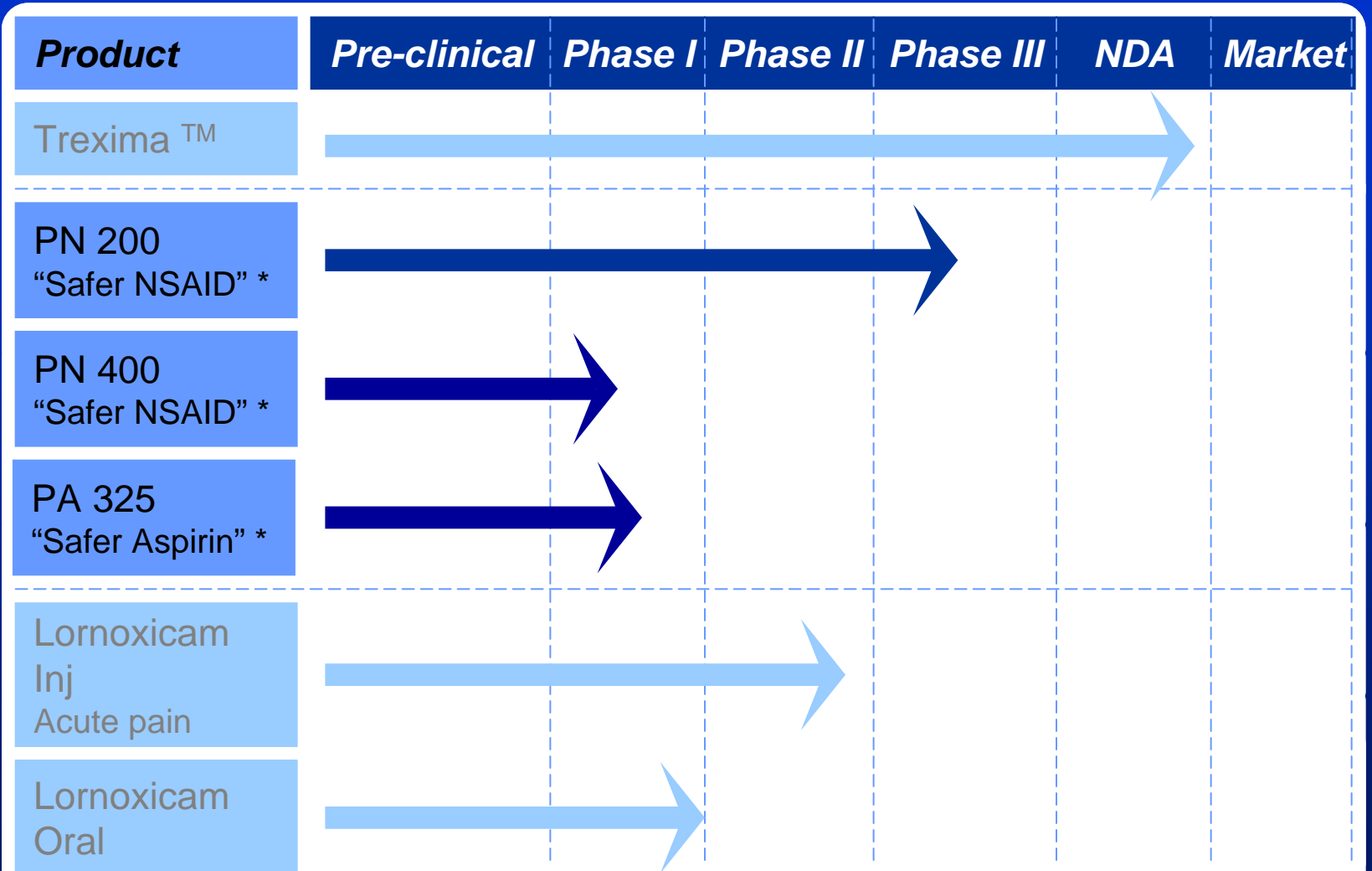


Source: IMS Health, IMS National Sales Perspective™, 2006

Trexima[™] – Highlights

- “Approvable” Letter received June 2006
- FDA determined Trexima effective as acute treatment for migraine headaches; requested additional safety information
- Filed amended response to FDA in early February 2007; Accepted by FDA; Anticipated action date August 1, 2007
- Trexima beat Imitrex in head-to-head studies
- GSK is the dominant market leader in \$2.2B U.S. migraine market
- Future Trexima revenues have no offsetting expense

POZEN Product Pipeline Status



* Product expected to reduce ulcers vs. NSAID alone

PN 400: Next Generation Arthritis Therapy

- Collaboration agreement with AstraZeneca to develop PN 400 indicated for signs and symptoms of osteoarthritis, rheumatoid arthritis and ankylosing spondylitis in patients at risk for developing NSAID-associated ulcers
 - POZEN responsible for U.S. development program and NDA submission
 - AstraZeneca responsible for all manufacturing, marketing, sales, distribution and RoW development and regulatory submissions
- Expected Benefits
 - All claims of naproxen through bioequivalence
 - Proven gastric ulcer reduction
 - Ensures co-therapy adherence

POZEN/AstraZeneca Deal Terms

- **Total Upfront And Milestone Payments** **\$375 million**
 - Upfront fee \$40 million ✓
 - Development and regulatory milestones \$160 million
 - Sales performance milestones based on achievement of certain sales thresholds \$175 million

- **POZEN Will Receive Tiered Royalties Based On Sales**

Naproxen - What The Experts Are Saying

- “For patients with arthritis or other conditions who require chronic pain relief, naproxen appears to be the safest NSAID choice from a cardiovascular perspective.”¹
- “For patients at high risk of NSAID-related gastrointestinal tract complications, naproxen plus a proton pump inhibitor is less costly and as effective, and probably safer, than low-dose celecoxib.”¹
- “Naproxen does not increase the risk of heart attacks and ought to be a painkiller of choice.”²

1. Graham, David, COX-2 Inhibitors, Other NSAIDs, and Cardiovascular Risk, Editorial, JAMA published online September 12, 2006

2. Dr. Curt Furberg serves on FDA Drug Safety and Risk Management Advisory Committee

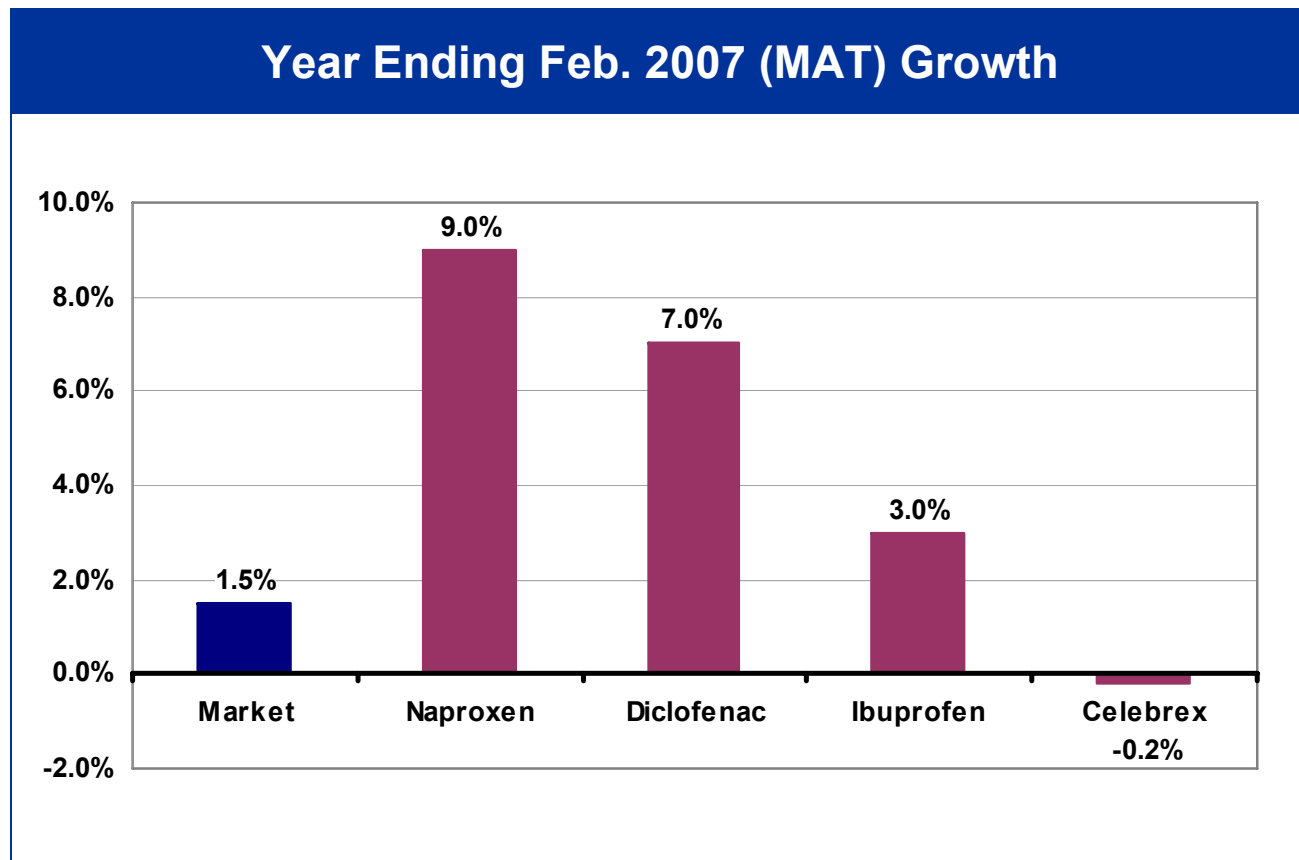
Cardiovascular Risk of NSAIDs From Highest to Lowest

Brand/Generic Drug Name	RR*	95% C.I.
High-Dose Vioxx (rofecoxib)	2.19	1.64-2.91
Diclofenac	1.40	1.16-1.70
All Vioxx (rofecoxib)	1.35	1.15-1.59
Low-Dose Vioxx (rofecoxib)	1.33	1.00-1.79
Indomethacin	1.30	1.07-1.60
Mobic (meloxicam)	1.25	1.00-1.55
Other NSAIDs	1.10	1.00-1.21
Ibuprofen	1.07	0.97-1.18
Celebrex (celecoxib)	1.06	0.91-1.23
Piroxicam	1.06	0.70-1.59
Naproxen	0.97	0.87-1.07

*Relative cardiovascular risk where 1 = neutral

Source: McGettigan P., Henry D. Cardiovascular risk and inhibition of cyclooxygenase: A systematic review of the observational studies of selective and nonselective inhibitors of cyclooxygenase 2. JAMA published online September 12, 2006.

Anti-Arthritis Oral Total Prescriptions Dispensed



* Source: IMS National Prescription Audit

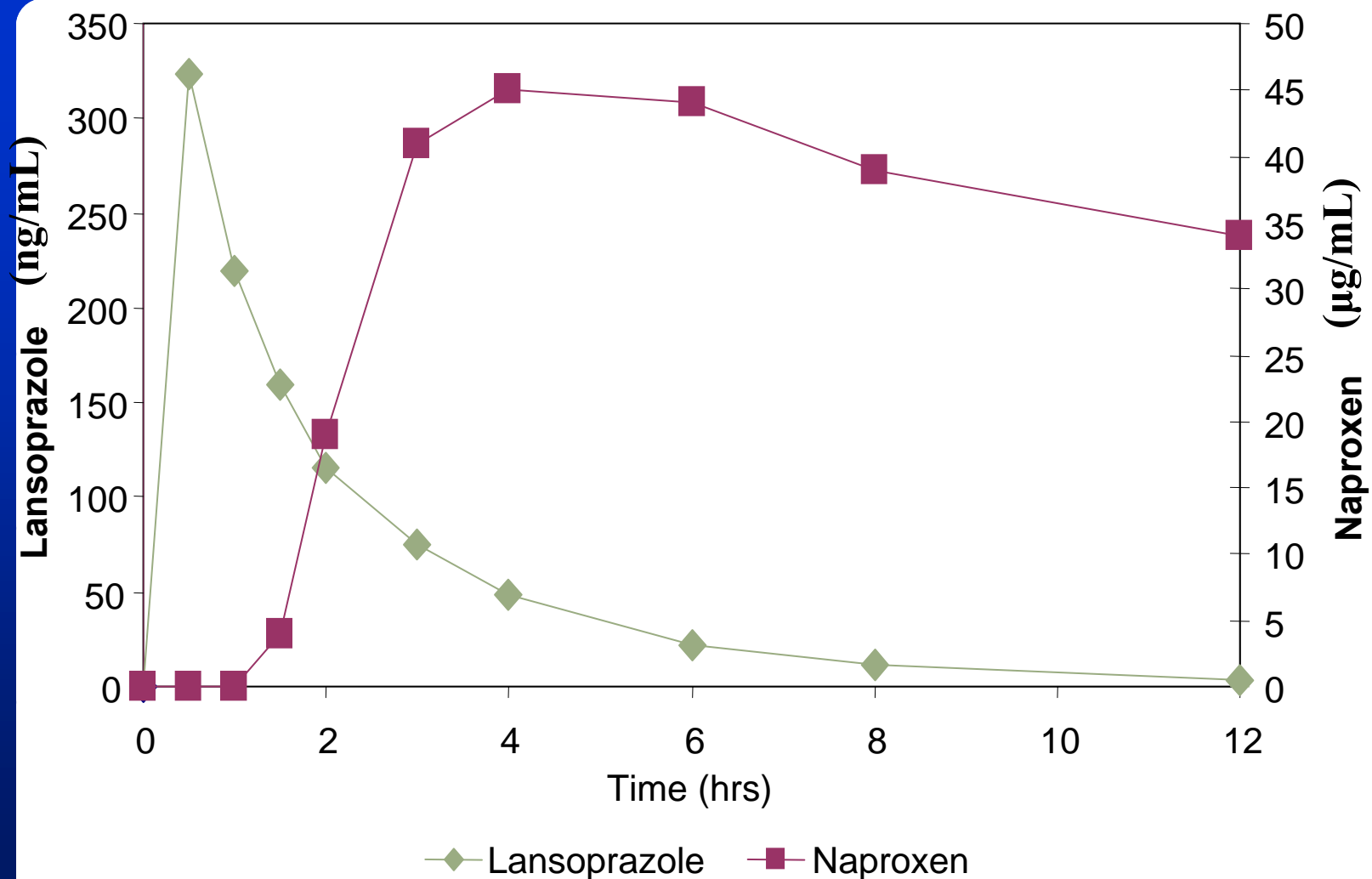
The Time for PN is Now!

- 60 million Americans regularly use NSAIDs¹
 - Clinically serious GI side effects (deaths, hospitalizations, bleeding) occur in 1-2%
 - Approximately 16,500 NSAID attributable deaths and 100,000 hospitalizations yearly in U.S.
- Mixed NSAID GI issues are well known
- COX-2 specific NSAIDs are not the answer
- PN provides better GI tolerability than naproxen, but with the same efficacy and CV safety profile of naproxen

¹ Cryer, Byron; NSAID-Associated Deaths: The Rise and Fall of NSAID-Associated GI Mortality, American Journal of Gastroenterology, 2005

PN Delivers Protection Before the Offending Agent is Released

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Study PN 100-103

- Comparison of PN 100 vs. EC Naproxen vs. co-administration of EC PPI & Naproxen
- Normal healthy volunteers aged 40-65 years
 - 3 treatment groups
 - PN 100 BID (n=20)
 - EC naproxen 500mg BID (n=19)
 - EC PPI 15 mg q AM and naproxen 500 mg BID (n=20)
 - Endoscopy at baseline, Day 8, and Day 14
 - Lanza GI damage assessment rating scale

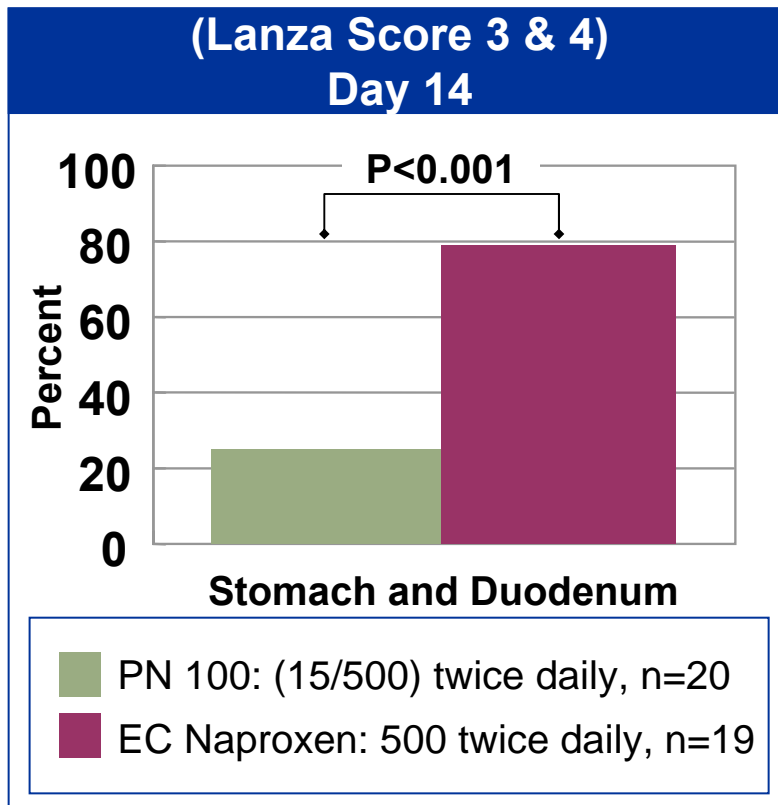
Study PN 200-101

- Comparison of PN 200 vs. EC Naproxen
- Normal healthy volunteers aged 40-65 years
 - 2 treatment groups
 - PN 200 tablet BID (n=20)
 - EC naproxen 500 mg BID (n=20)
 - Endoscopy at baseline and Day 15
 - Lanza GI damage assessment rating scale

PN Significant in Reducing Gastropathy

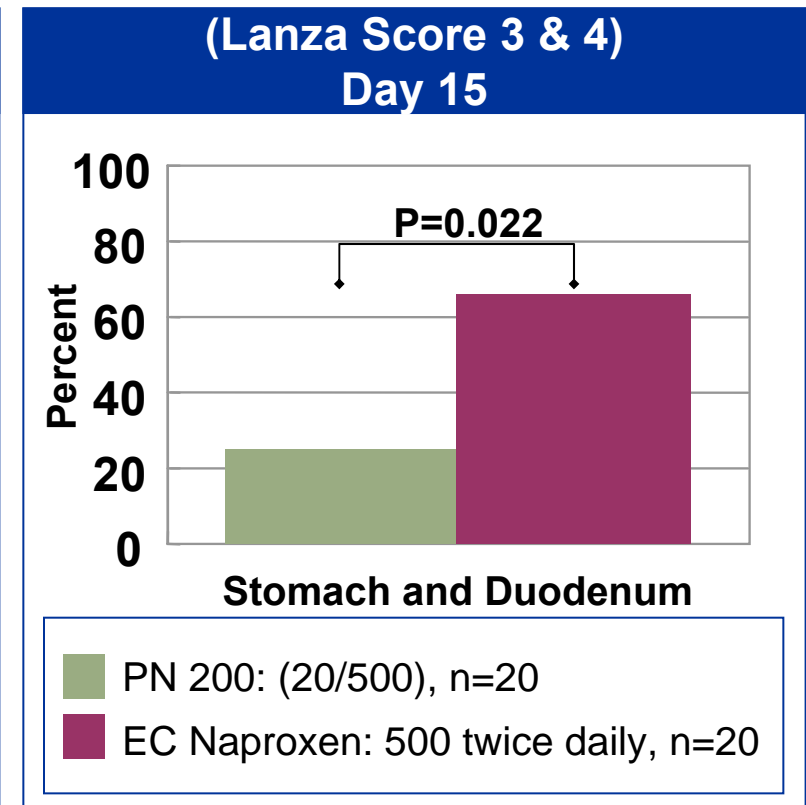
PN 100-103:

Results at Day 14 Endoscopy



PN 200-101:

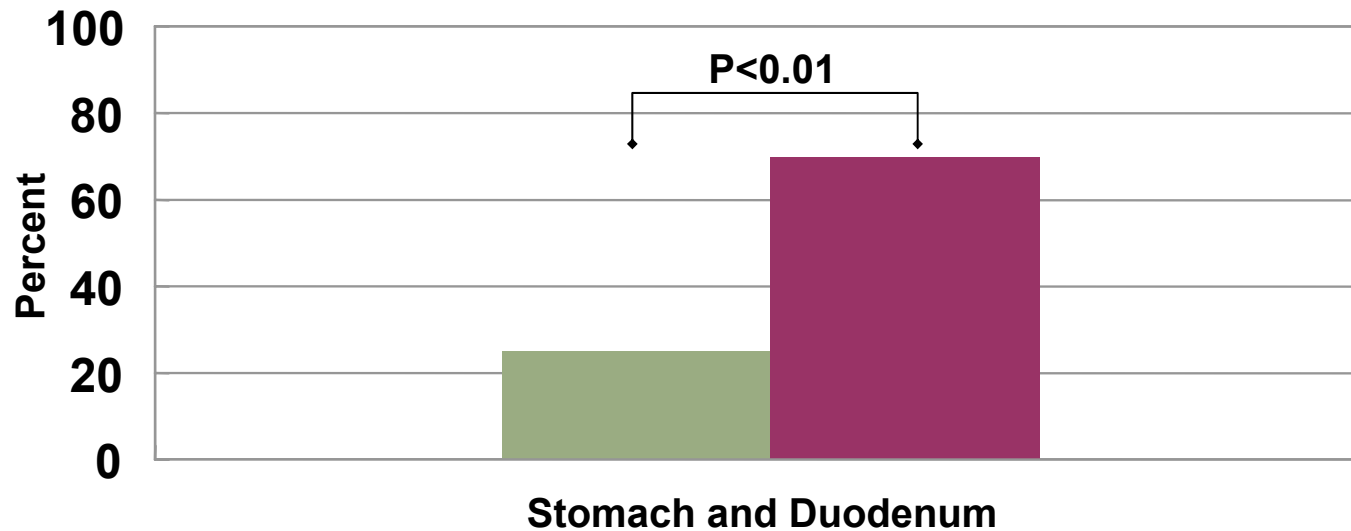
Results at Day 15 Endoscopy



PN 100-103: PN vs. Co-Therapy Results at Day 14 Endoscopy

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(Lanza Score 3 & 4)
Day 14



■ PN 100: (15/500) twice daily, n=20

■ Co-prescribing: Lansoprazole each AM; Naproxen 500 twice daily, n=20

PN 400 Development Plan

- Proof-of-Concept with PN 200 to test longer-term gastro-protection on-going
- Phase I and II dose finding studies beginning Q2 2007. Phase III targeted to begin Q3 2007
- Arthritis Patients at Risk (Two Pivotal Studies)
 - PN 400 vs. EC naproxen alone (twice daily)
 - Primary Endpoint: Cumulative incidence of gastric ulcers at 6 months
- Arthritis Patients at High Risk
 - PN 400 vs. approved co-active therapy
 - Primary Endpoint: Cumulative incidence of gastric ulcers at 6 months
- Traditional 12-month Open Label Experience Study
 - No long-term CV safety study requested
- Certain Phase IIIb studies planned to enhance competitive profile

PN 400 Highlights

- Collaboration agreement with AstraZeneca - \$375 million in upfront and milestone payments
- Patent expiration - 2023
- PN400 scheduled to enter Phase 3 Q3 2007
- Naproxen appears to be the safest NSAID from a CV perspective
- PN 400 is designed to deliver what most experts are suggesting for arthritis patients at risk of developing NSAID ulcers

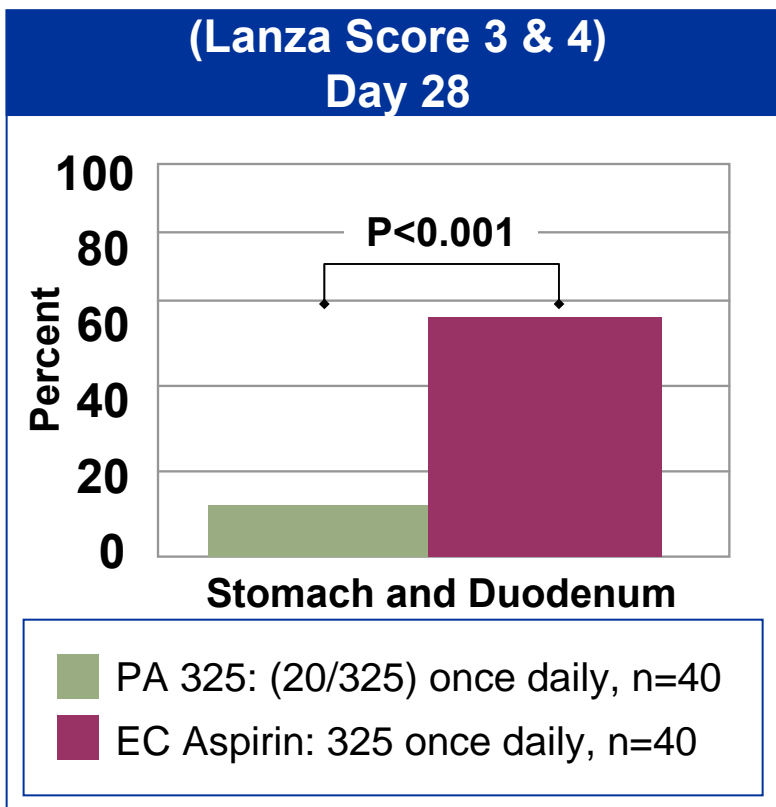
PA 325 “Safer Aspirin” Proof of Concept Study

- **PA 325 Study** - Two treatment groups/40 subjects per group
 - 28 day treatment period
 - Once daily PA 325 versus 325 mg EC aspirin
- Compare gastro-protective effects utilizing Lanza scores
- Pharmacokinetic evaluation
- **Expected Benefits**
 - Significant reduction of GI damage vs. aspirin alone
 - Cardiovascular protection same as aspirin
 - Similar low-dose aspirin pharmacology/AE profile ex-GI system
- Patent issued 2005 – expires 2023

PA 325 Significant in Reducing Gastropathy

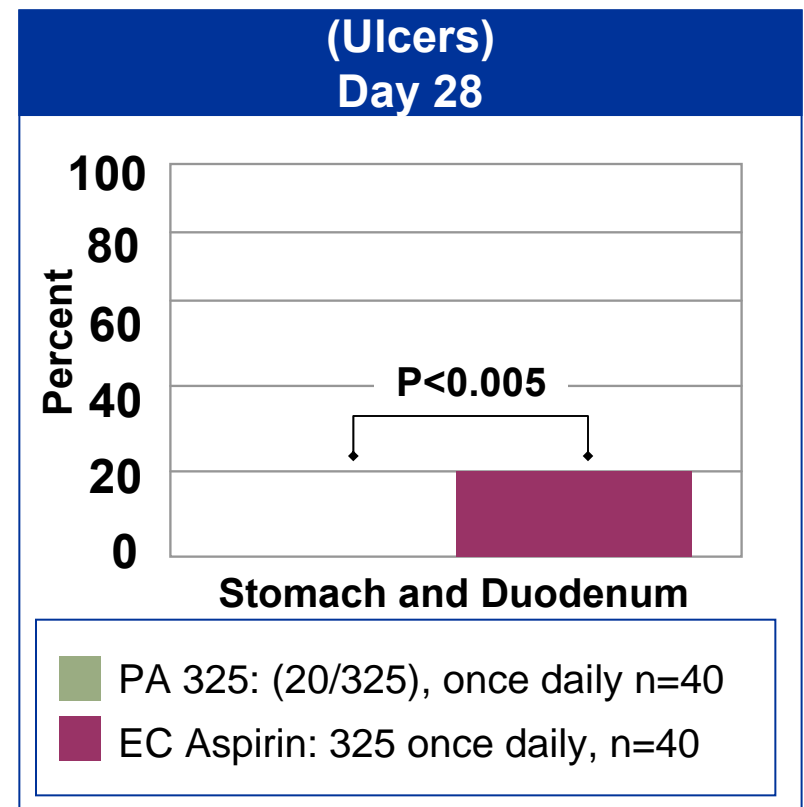
PA 325: Lanza 3 & 4

Results at Day 28 Endoscopy



PA 325: Ulcers

Results at Day 28 Endoscopy



Lornoxicam: Oral and Parenteral NSAID

- Potent and balanced COX-1/COX-2 NSAID
- Proven efficacy and safety for post-operative use
- In clinical use outside the US since 1997
- Pain relief similar to opioids but without the narcotic side effects
- GI safety profile expected to be much better than parenteral ketorolac

Key Events For 2007

- **2Q 07** – PN 400 Phase I studies initiated
- **3Q 07** – Initiate PN 400 Phase III trials
- **3Q 07** – Meet with FDA on PA program
- **3Q 07** – FDA action letter on Trexima
- **2H 07** – GSK planned launch of Trexima
- **2H 07** – Meet with FDA on Lornoxicam program

Financial Overview

Financial Overview

Cash at 3/31/07	\$58.2 million
Debt	--
Shares Outstanding	29 million
Market Capitalization	\$449 million

Q2 2007 Guidance *

Revenue	\$11.7 - \$14.7 million
Amortization	\$3.7 million
AZ Agreement-Development Revenue	\$8 - \$11 million
Operating Expenses	\$15 - \$18 million

* Guidance Provided as of May 2, 2007

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