PLX PHARMA INC.

Corporate Presentation

Nasdaq: PLXP

Forward-Looking Statements

This presentation includes or incorporates by reference statements that constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Act of 1934, as amended. These statements relate to future events or to our future financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. These statements include, but are not limited to information or assumptions about expenses, capital and other expenditures, financing plans, capital structure, cash flow, liquidity, managements' plans, goals and objectives for future operations and growth. In some cases, you can identify forward-looking statements by the use of words such as "may," "could," "expect," "intend," "plan," "seek," "anticipate," "believe," "estimate," "predict," "potential," "continue," or the negative of these terms or other comparable terminology. You should not place undue reliance on forward-looking statements since they involve known and unknown risks, uncertainties and other factors which are, in some cases beyond our control and which could cause actual performance or results to differ materially from those expressed in or suggested by forward-looking statements.

Important factors that could cause such differences include, but are not limited to (i) our ability to bring both Aspertec™ 81 mg and Aspertec 325 mg to market-readiness; (ii) our ability to maintain regulatory approval of Aspertec 325 mg or obtain and maintain regulatory approval of Aspertec 81 mg and any future product candidates; (iii) the benefits of the use of Aspertec 325 mg and Aspertec 81 mg; (iv) our ability to successfully commercialize our Aspertec products, or any future product candidates; (v) the rate and degree of market acceptance of our Aspertec products or any future product candidates; (vi) our ability to scale up manufacturing of our Aspertec products to commercial scale; (vii) our ability to successfully build a specialty sales force and commercial infrastructure or collaborate with a firm that has these capabilities; (viii) our ability to compete with companies currently producing GI-safer technologies for NSAIDs and other analgesics; (ix) our reliance on third parties to conduct our clinical studies; (x) our reliance on third-party contract manufacturers to manufacture and supply our product candidates for us; (xi) our ability to retain and recruit key personnel, including development of a sales and marketing function; and (xii) our ability to obtain and maintain intellectual property protection for our Aspertec products or any future product candidates.

Should one or more of these risks or uncertainties materialize, or should any of our assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. We do not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

Our Mission

PLx Pharma is focused on developing & commercializing next-generation oral NSAIDs and other drugs that leverage our proprietary PLxGuard technology to achieve greater efficacy and improved safety versus current in-market oral products

About PLx Pharma

Novel drug delivery technology

- Applicable to a variety of APIs

Lead product: Aspertec™

- Aspertec 325 mg clinical data support best-in-class positioning over enteric-coated aspirin with faster-acting, more reliable and more predictable efficacy
- Late-stage product opportunity
- OTC product with 2 dose strengths: 325 mg dose already approved via 505(b)(2) NDA and 81 mg dose to be approved via CMC sNDA
- Commercially launch Aspertec with focus on high risk cardiovascular patients
- $12+ billion overall addressable market
- Significant physician interest in Aspertec

Unique commercial strategy

- Targeting OTC and Rx
- Physician directed sales force

PLx Management Team

Name	Experience
Michael (Mike) J. Valentino Executive Chairman of the Board	• 35+ years CEO and senior management with successful OTC and Rx brands • OTC brand, Mucinex® (~$2.3 billion exit in 4.5 years)
Natasha Giordano President and CEO	• 20+ years CEO and senior management commercialization experience
Rita M. O'Connor Chief Financial Officer	• 25+ years pharma and finance leadership at private & public companies
Tom Long VP, Manufacturing & Technical Operations	• Deep experience successfully manufacturing & launching OTC products, with NDAs and OTC Monograph Drugs
Steven Valentino VP, Trade Sales	• 25+ years in OTC and consumer healthcare including Rx-to-OTC switches, brand management, trade sales
Mike Dillon VP, Sales & Marketing	• Strong track record building high-performing specialty sales teams, launching/promoting blockbuster products

Independent Board of Directors & Advisors

Director	Experience
Gary S. Balkema	• Former global head of Bayer Healthcare LLC and Worldwide Consumer Care Division • At Bayer USA, repositioned aspirin after ten year decline into a growing business • Prior VP and General Manager for American Cyanamid Co.'s Lederle Consumer Health Division
Kirk Calhoun	• Former audit committee chair, Adams Respiratory • Former Partner, Ernst & Young LLP
Robert (Bob) Casale	• Former Adams Respiratory COO (Mucinex® launch, Adams' IPO and $2.3 billion sale) • Former senior manager at Pfizer, Warner Lambert and CEO of Scerene Healthcare
John W. Hadden II	• Former CEO of IRX Therapeutics (private) • Former healthcare investment banker at JP Morgan & Co.
Efthymios Deliargyris, MD, FACC, FESC, FSCAI	• Internationally-recognized expert in cardiovascular disease and thrombosis • The Medicines Company, Athen's Medical Group, Wake Forest School of Medicine

Selected Advisors

- **Dominick Angiolillo, MD, PhD** -- Cardiologist (PI)
- **Deepak Bhatt, MD** -- Cardiologist, antiplatelet expert (PI)
- **Byron Cryer, MD** -- Gastroenterologist, NSAID expert (PI)
- **Tilo Grosser, MD** – Platelet Pharmacologist (PI)
- **Carey Kimmelstiel, MD** – CV Interv. (PCI/PVI)
- **Jayne Prats, PhD** – Platelet expert (PK/PD)
- **Todd Rosengart, MD** -- CT Surgery
- **Gabriel Steg, MD** – EU Representative

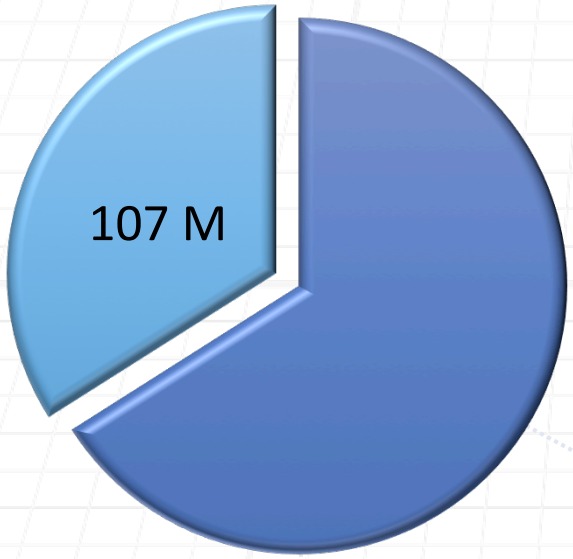
PI: Principal Investigator

Aspertec: Targeting an Unmet Medical Need

PLX PHARMA INC.

Aspertec: Targeting an Unmet Medical Need

34% of U.S. Population Falls in Categories for which Aspirin Would be Recommended [1]



Under *half* of these actually use aspirin

GI complications from NSAIDs limit compliance

50+ million people who could benefit from aspirin use are left vulnerable to cardiovascular events

1. U.S. Census Bureau estimate, September 2014

Current Aspirin Landscape

Widespread usage

- Aspirin is one of the most widely-used drugs in the world

Global standard of care

- Foundational drug used to treat and prevent the leading cause of death, cardiovascular disease

Compliance limitations

- Gastrointestinal (GI) upset / intolerability limits patient compliance

Enteric coated (EC) aspirin dominates the aspirin market

- (> 90% of U.S. sales) due to the perception that it has equivalent antiplatelet action and greater GI safety than regular aspirin - neither of which is correct

Published Studies Support Aspirin - not EC Aspirin

>200 studies support aspirin benefit

EVERY important clinical study supporting cardiovascular benefit of aspirin was conducted using immediate release (not EC) aspirin[1]

JAMA Dec 2014: Japanese study in >14,000 high-risk primary prevention subjects comparing 100 mg EC aspirin vs. no aspirin stopped after 5 years, **found *no benefit for EC aspirin*[2]**

1. ISIS-2 (Second International Study of Infarct Survival) Collaborative Group. Randomised trial of intravenous streptokinase, oral aspirin, both, or neither among 17187 cases of suspected acute myocardial infarction: ISIS-2. Lancet 1988; 2: 349–60

2. Ikeda Y *et al*, Low-Dose Aspirin for Primary Prevention of Cardiovascular Events in Japanese Patients 60 Years or Older With Atherosclerotic Risk Factors A Randomized Clinical Trial. *JAMA*. 2014;312(23):2510-2520. doi:10.1001/jama.2014.15690

Why Does EC Aspirin Induce Gastric Ulceration?

Unidirectional Protection

1 Stomach

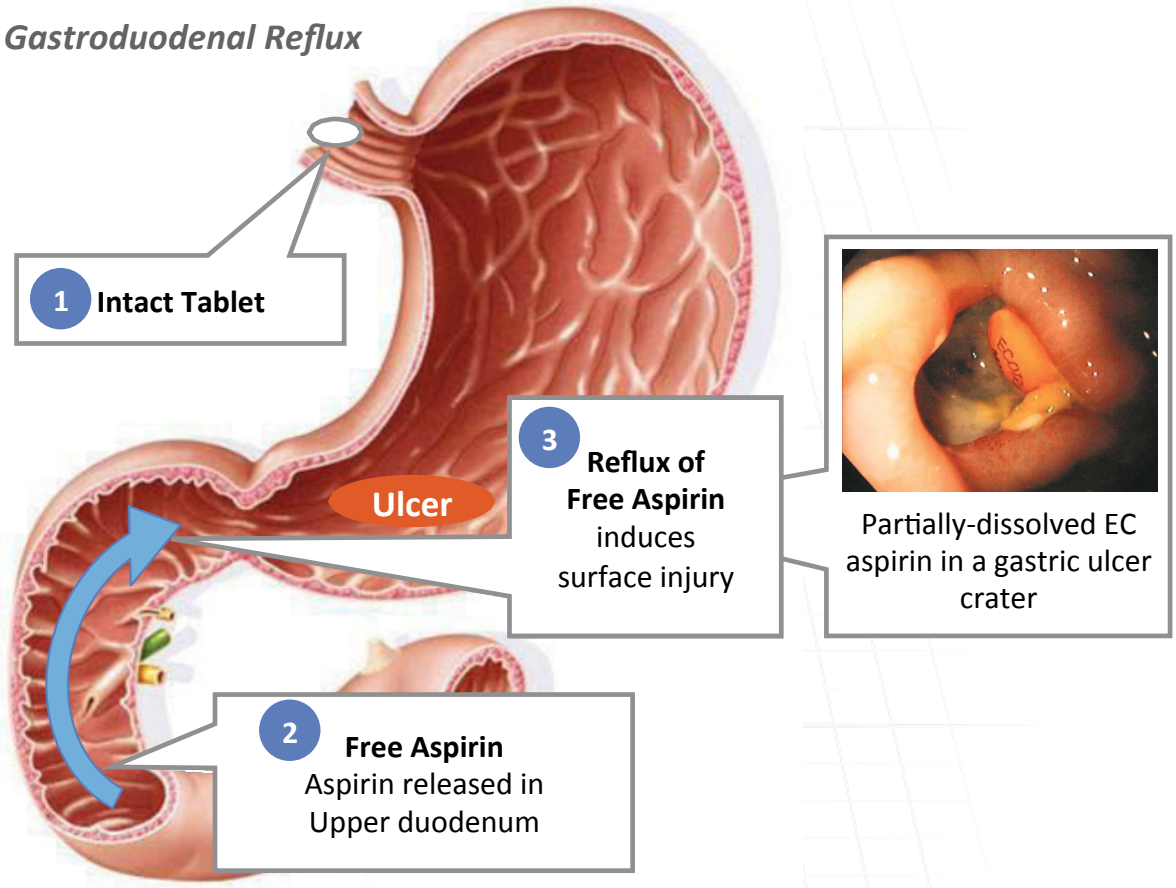
EC aspirin tablet intact in stomach (pH 3); no initial surface injury

2 Duodenum

EC aspirin disintegrates in duodenum (pH 5.5); free aspirin refluxes back into stomach

3 Result

Free aspirin refluxes into stomach and induces surface injury



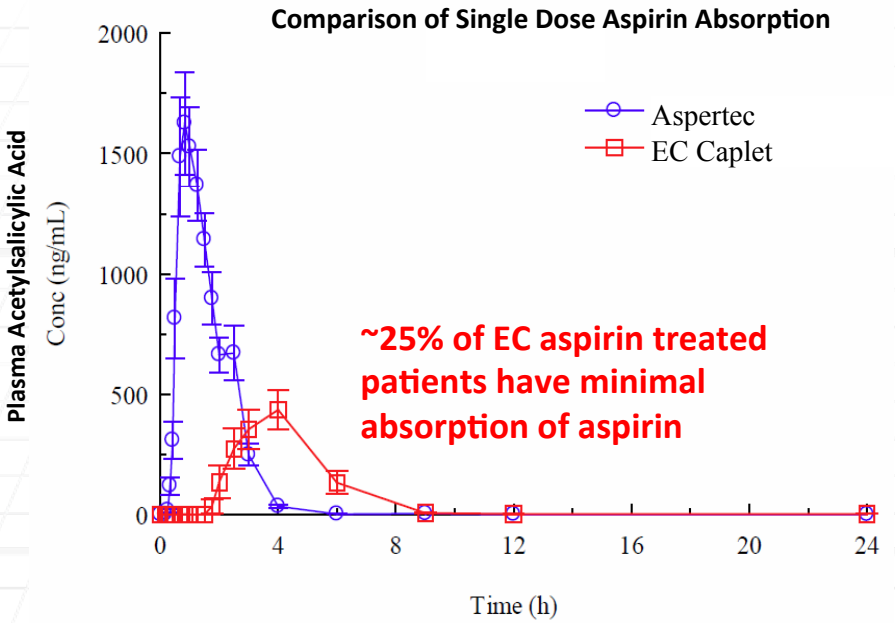
Novel Delivery System: PLxGuard

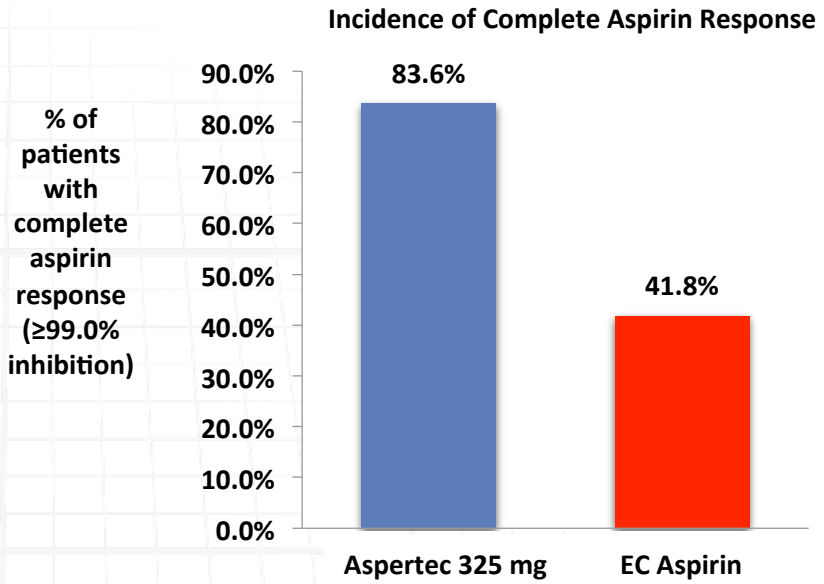
Utilizes surface acting lipids to selectively release drugs in targeted portions of the GI tract

Delivers better, more reliable absorption and antiplatelet efficacy

Mechanism of action enables strong patent life

Aspertec Clinically Demonstrates Better Absorption & Antiplatelet Efficacy than EC Aspirin





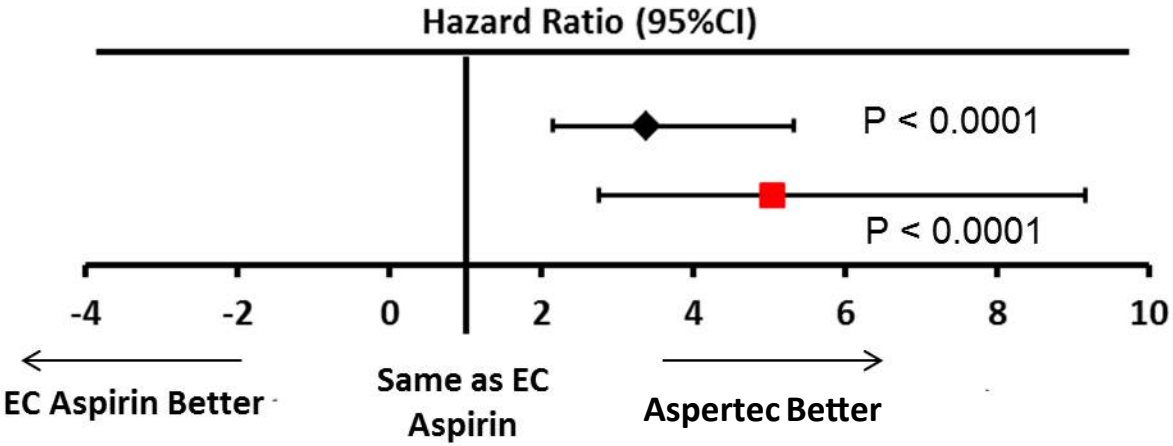
- Single dose pharmacokinetics and thromboxane depletion in non-insulin dependent diabetics
- Two independent studies in 92 subjects
  - PL-ASA-004 published in the *Journal of American College of Cardiology*[1]
  - PL-ASA-006 study manuscript in preparation

Results: Aspertec has Predictable and Reliable Absorption and Antiplatelet Activity

1. Bhatt *et al* Enteric Coating and Aspirin Nonresponsiveness in Patients With Type 2 Diabetes Mellitus, JACC, Jan 2017, 23269; DOI: 10.1016/j.jacc.2016.11.050

Aspertec Clinically Demonstrates More Reliable and Predictable Antiplatelet Efficacy than EC Aspirin

Aspirin Antiplatelet Response



Index Period

11 days

4 days

◆ PL-ASA-006
■ PL-ASA-004

Aspertec	325 mg EC Aspirin
3-5X greater chance of complete antiplatelet benefit compared to 325 mg EC Aspirin	75% of patients required 4-5X greater number of doses for maximal response compared to Aspertec

Results: Aspertec has Greater Chance of Achieving a Complete Aspirin Response

Aspertec: Better Acute GI Safety than Aspirin

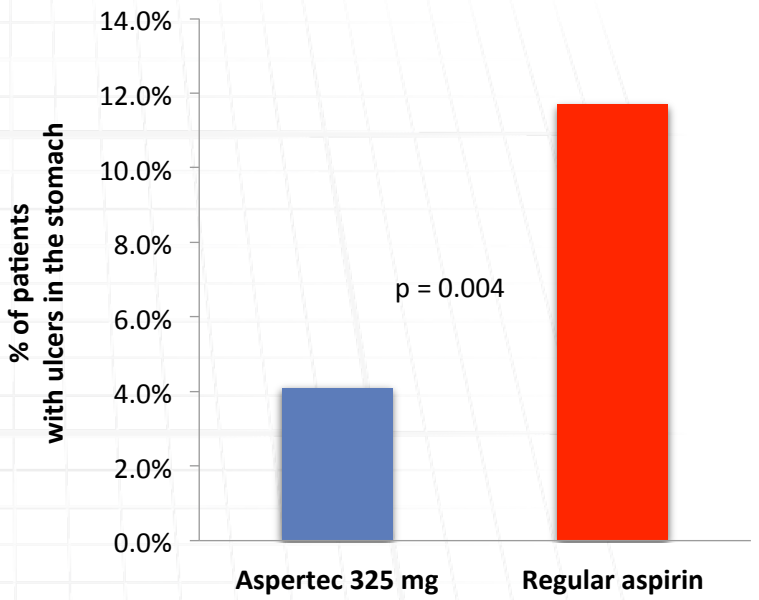
Aspirin's Surface Injury

- Aspirin induces corrosive damage by direct contact with the gastric surface - manifested as ulceration and bleeding
- Endoscopy demonstrates EC aspirin is not GI safer, with no difference in ulcer risk compared to regular aspirin

Aspertec Solution

- Aspertec's lipid matrix release is based on pH, presence of bile, and enzymatic digestion
- Resulting in predictable release
- Fewer gastric erosions and acute ulcers

65% Fewer Acute Gastric Ulcers



Seven day endoscopy endpoints combined from two PLx clinical studies (PL-ASA-002 and PL-ASA-005) endoscopy trials with Aspertec 325 mg vs. regular 325 mg aspirin taken daily, in **441 subjects** with an age-associated risk for cardiovascular disease, demonstrated a minimum of **65% reduction** in risk for gastric ulcers. (PL-ASA-002 published in *American Journal of Gastroenterology*, 2010.)

Results: Aspertec has Better Acute GI Safety than Regular Aspirin

Aspertec: Unlocking Aspirin's Full Potential

Differentiated Marketing Claims

- **3-5 times greater chance of complete antiplatelet effect than EC aspirin**
  - In head-to-head clinical trials with EC aspirin, Aspertec 325 mg provided faster acting, more reliable, predictable and sustainable antiplatelet efficacy than EC aspirin
- **65% lower risk of acute gastric ulceration than regular aspirin**
  - EC aspirin is not in fact GI safer than regular aspirin

FDA Approval

- No aspirin product currently marketed as OTC has FDA NDA approval
- 325 mg dose approved via 505(b)(2) NDA

Addressing Significant Unmet Need

- Our research indicates that most of physicians interviewed have an interest in prescribing or recommending Aspertec for their high-risk patients

Large Market Opportunity in Four Sizable High-Risk Patient Populations

	Secondary Coronary Artery Disease (CAD) Prevention	Secondary Stroke Patients[1]	Diabetes with >1 Risk Factor[2]	High Risk Primary Prevention
Definition	Patients who have previously had a CAD event including • Myocardial Infarction • Coronary Artery Bypass Graft (CABG) • Percutaneous Coronary Intervention (PCI)	Patients who have previously had a stroke event including: – Cerebral Vascular accident – Transient Ischemic Attack – Carotid Endarterectomy/ Stenting Patients	Patients who have been diagnosed with diabetes and have >1 risk factor	Patients over the age of 45 who also have >1 risk factor
Addressable Patient Population	~17 million	~8 million	~7 million	~15 million
Total Retail Market Size	**$4.7 billion**	**$2.2 billion**	**$1.9 billion**	**$4.1 billion**

~1% of this Market = ~$125 Million Retail Revenue

Note: CAD and Stroke assumes a 70% / 30% split between 81 mg and 325 mg while a 80% / 20% split between 81 mg and 325 mg assumed for Diabetes and Primary Prevention.
(1) Omits hemorrhagic and cardioembolic population.
(2) Omits population with CVD and those accounted for within primary prevention.

MDs Indicate High Intent to Prescribe Aspertec

Quantitative and qualitative research completed with cardiologists, interventional cardiologists, neurologists, and endocrinologists

	>1,000 Aspirin Therapy Prescribers			
	Cardiologists	Neurologists	Endocrinologists Diabetologists	GPs
Number of Physicians:	201	100	100	104
WOULD PRESCRIBE	81%	86%	80%	77%
Definitely would prescribe it	43%	51%	39%	28%
Probably would prescribe it	38%	35%	41%	49%
Might/might not prescribe it	15%	13%	20%	20%
Would not prescribe	4%	1%	-	3%
Probably would not prescribe it	2%	1%	-	2%
Definitely would not prescribe it	1%	-	-	1%

Consumers (2,000 surveyed) were more likely to purchase specific OTC products when prescribed by a physician

How Doctors Would Prescribe Aspertec

	Aspirin Therapy Prescribers			
	Cardiologists	Neurologists	Endocrinologists Diabetologists	GPs
Number of Physicians:	201	100	100	104
Patients who have had a cardio-vascular incident/heart attack	83%	78%	87%	83%
Patients who have had a cerebral incident/stroke	71%	88%	72%	76%
Patients with high risk factors	69%	74%	76%	77%
Patients with diabetes	60%	47%	71%	64%
Patients with a family history that puts them at risk	49%	49%	57%	57%
Patients who are overweight/large BMI/ obese	33%	35%	34%	39%
Other	10%	4%	4%	5%
None	3%	2%	–	5%

[1] Weinman Schnee Morais Inc. (company data)

Positioning Aspertec as the Standard of Care

- Clinical Data Support:
  - Faster acting than EC aspirin
  - Better antiplatelet efficacy than EC aspirin
  - Better acute GI safety when initiating antiplatelet therapy

Potential to be Best-in-class for Acute Coronary Syndrome (ACS)

- Market Segmentation:
  - Aspertec targets most at risk (secondary prevention)
- Market research suggests MDs recognize EC aspirin limitations when presented Aspertec clinical data
  - Physicians surveyed expressed interest in prescribing or recommending Aspertec for their high-risk patients[1]
- Market Penetration
  - PLx intends to use clinical differentiation via a physician detail to influence clinician behavior

[1] Weinman Schnee Morais Inc. (company data)

National Launch: Target Audience

Primary

Physician Specialists

33,000 physicians - Highly targetable specialty universe: Cardiologists, Neurologists, Endocrinologists/Diabetologists

- Top 3-5 Deciles write 75-85% of all prescriptions
- **Total Targets: 12,000 – 15,000 physician specialists**
- Field reps are appropriately scalable

Pharmacists

Trusted professional among patients; easily targeted through retailer partnership

Highly targetable; utilize retailer loyalty programs focused on chronic diseases and POS coupons (e.g., Catalina)

Secondary

Consumers

Made aware of Aspertec by their physician

Direct to consumer opportunity available after product has been established

Pipeline Leverages PLxGuard Platform Technology

PLxGuard Applicable to a Variety of APIs

Product Candidate	Type	Pre-Clinical / Phase 1 / Phase 2 / Phase 3
Aspertec Brand Extensions Pain & Fever Acute Indications* New Combination Products	**OTC**	Pain & Fever - 325 mg Approved
PL1200 Ibuprofen, 200 mg* Pain, Inflammation and Fever	**OTC**	
Other NSAIDs e.g. Indomethacin**, Diclofenac**	**OTC & Rx**	
Alternative to Enteric-Coating For a Variety of Small and Large Molecules	**OTC & Rx**	

In clinical (*) and pre-clinical (**) proof-of-concept studies, these product candidates demonstrated improved GI safety vs. the in-market drug

Upcoming Milestones/Activities to Position Aspertec as Best in Class

Pre-launch activities — 2018

- Create an esteemed Scientific Advisory Board to engage the scientific community
- Expand commercial leadership team
- Advance commercially oriented PK/PD study: Aspertec 81 mg
- Hire and train a 45-person, physician-directed sales force
- Optimize manufacturing process for commercial scale

Targeted 81 mg CMC sNDA submission with FDA approval — YE 2018/Q1 2019

Presentations and peer-reviewed publication of study data

Continue to expand global patent portfolio

Commercially launch Aspertec 325 mg and 81 mg — YE 2018/Q1 2019

Potential collaborations/partnerships for pipeline products

Thank you.

PLX PHARMA INC.