



Investor Presentation

November 2022



Drug Delivery Platform

Transforming drug safety and performance:

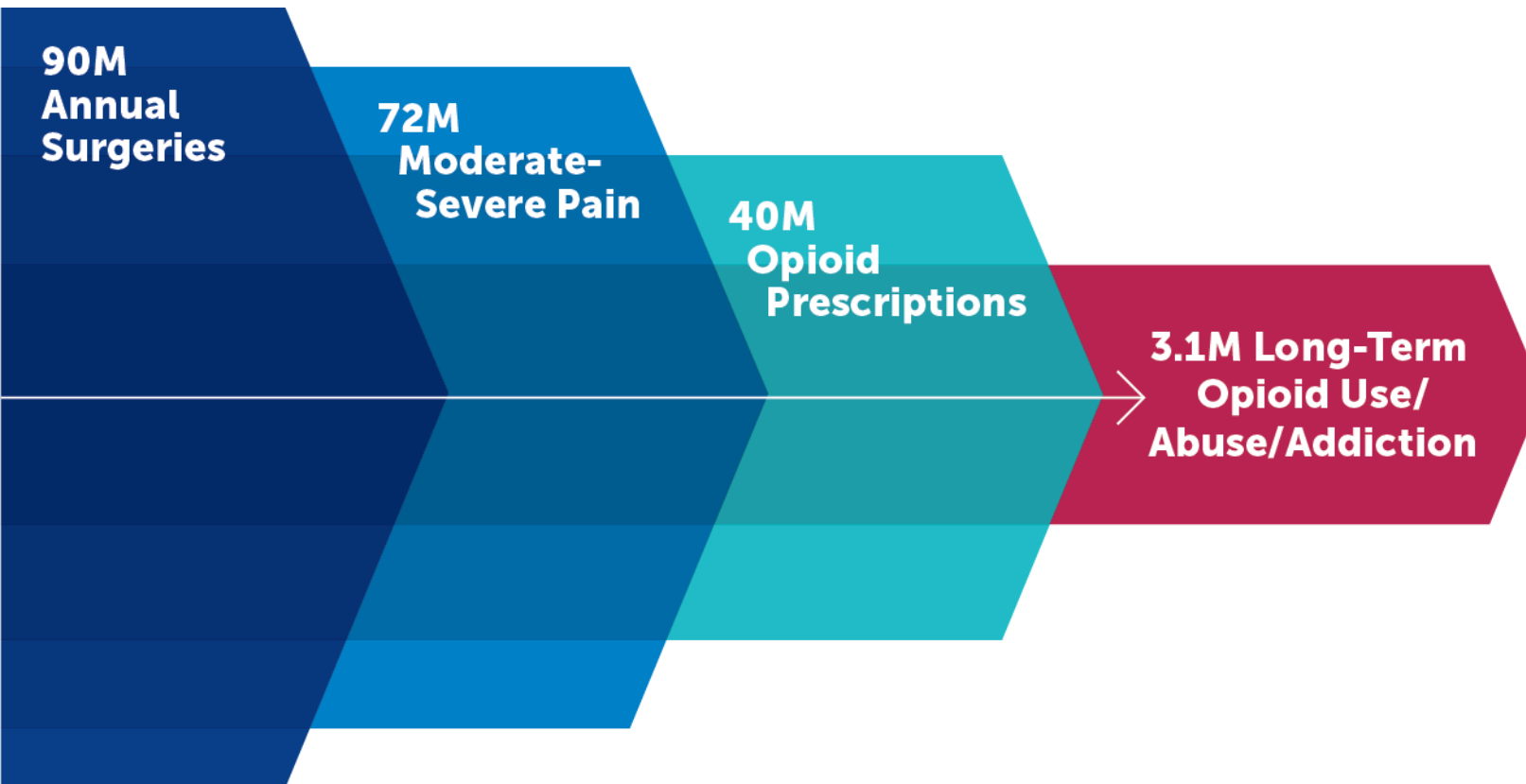
- Precision local delivery
- Extended release through proprietary controlled-release technology

Disruptive platform applicable to variety of drugs:
pain, cancer, antibiotics

Pain Management – Unmet Need

Surgical Pain Leads to Opioid Use and Abuse

US Statistics



- Post-operative pain management is enormous public health issue and personal health problem
- Narcotics (opioids) are mainstay of post-surgical pain treatment and poorly tolerated in many patients
- Negative effects of opioid abuse are a significant and growing problem

Overdose deaths in US⁴

46,802 in 2018

108,000 in 2021

Estimated annual US economic burden:

>\$78.5B⁵

Safe, effective, long-lasting, and non-opioid post-operative pain management is an important unmet need

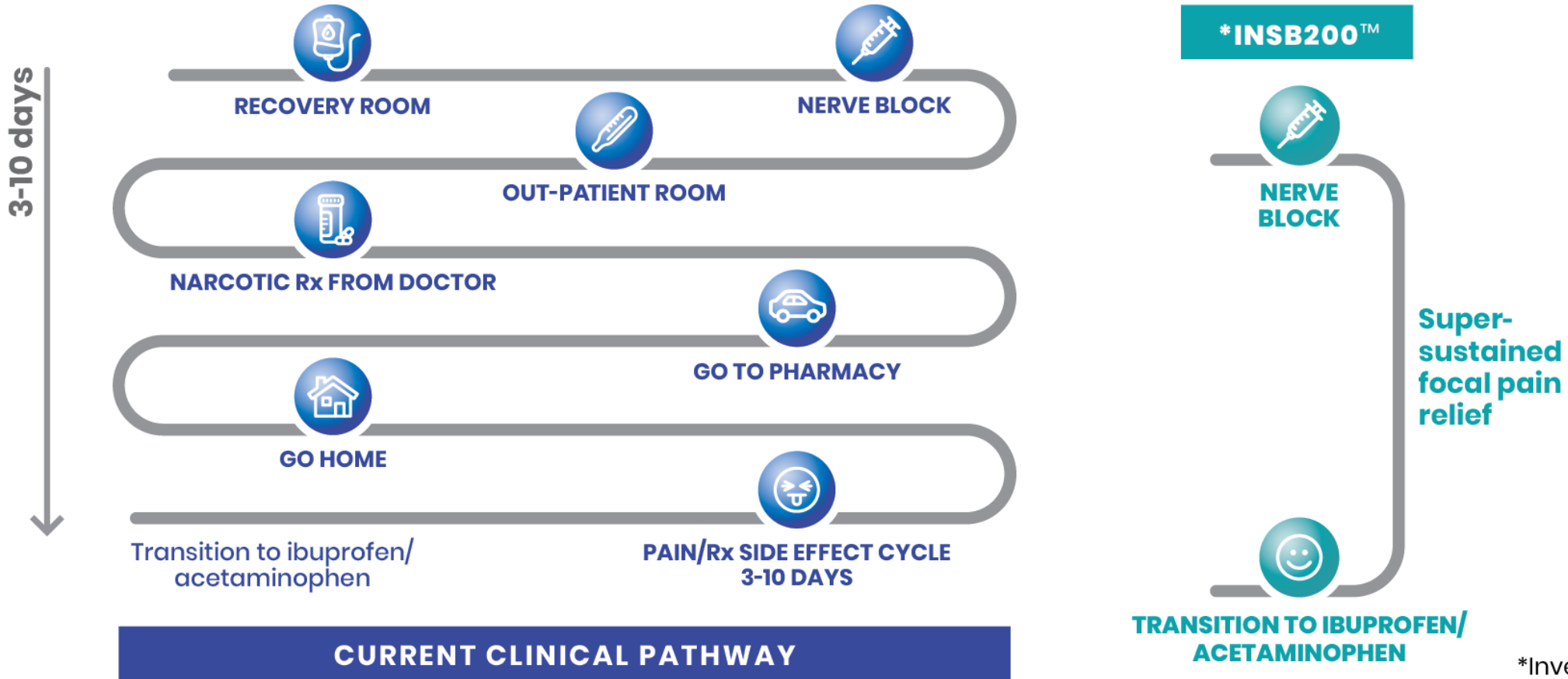
The Solution – INSB200™

- One peripheral nerve block (PNB) injection
- Ropivacaine + carrier
- Peri-operative pain control
- 5-day pain management
- No opioids



INSB200™ Benefits Patient, Family, Clinician, Facility, Insurer, Agency

POST-OP PAIN MANAGEMENT COMPARISON Current Clinical Pathway vs InSitu Biologics Pathway



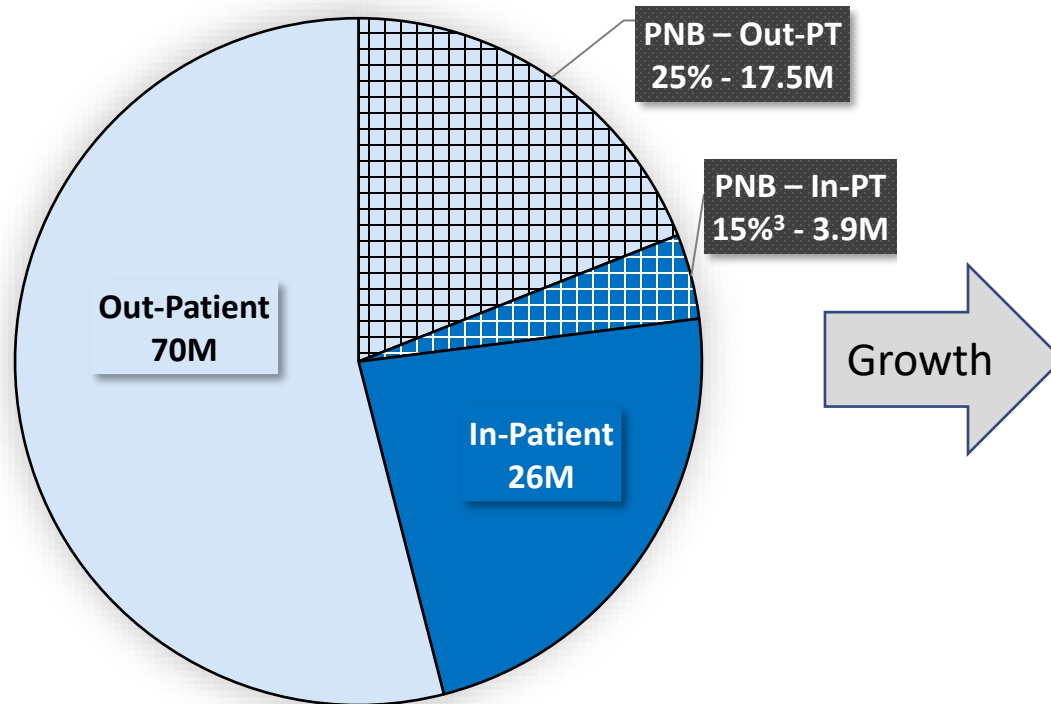
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*Investigational

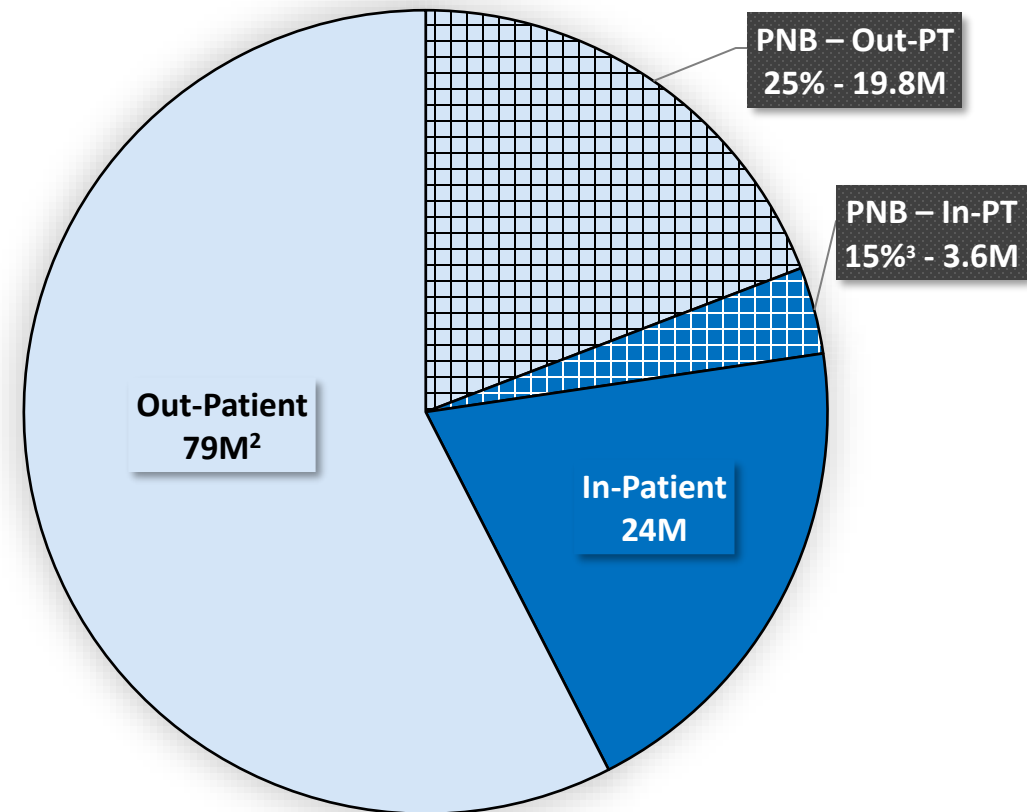


Market Opportunity – Extended-Release PNB

2020 – 96M Surgeries¹
21.4M Amenable to PNB



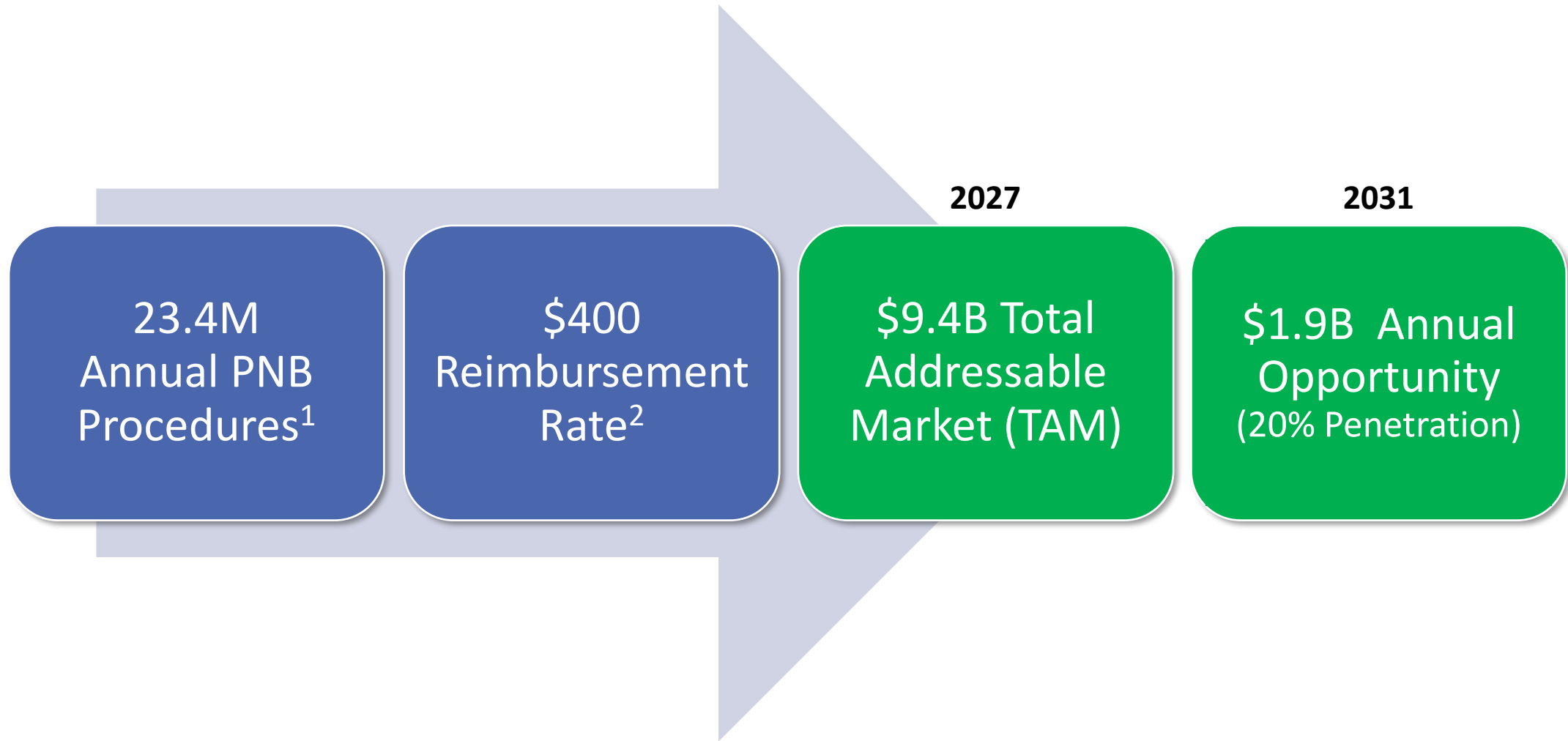
2027 – 103M Surgeries¹
23.4M Amenable to PNB = **\$9.4B TAM**



1. MedDeviceTracker - US Surgical Procedure Volumes – 2020-2027 projections
2. Assumes 1% out-patient mkt. capture per year (70-77%)
3. DRG Foundational Insights Research, Dec. 2016; Heron Corp. Presen., Dec. 2020

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INSB200™ – Market Opportunity



1. MedDeviceTracker - US Surgical Procedure Volumes – 2027 projections
2. Based on C9290 code (Exparel): \$1.29/mg – 2.5% inflation adjustment

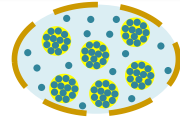

Extended-Release PNB – Wide Open Field

➤ Exparel® is only commercially available option but has **major deficiencies and limitations:**

- Duration – only ~24 hours
- Indication – only brachial plexus
- Bupivacaine – toxicity and motor recovery issues

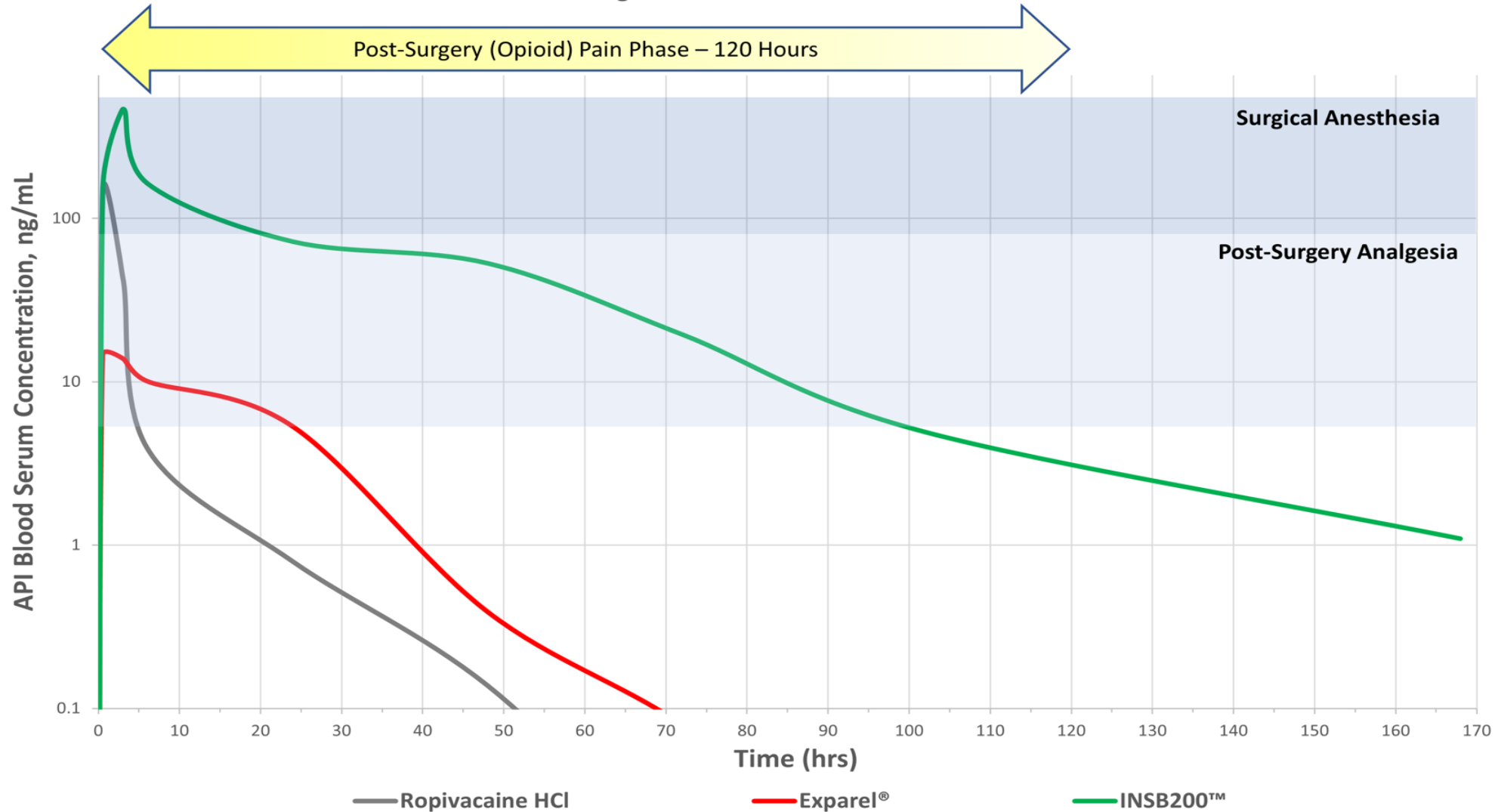
➤ INSB200™

- Duration – 120+ hours
- **Designed specifically for PNB** – will have broad clinical indication
- Uses ropivacaine – low cardiotoxicity/ neurotoxicity issues and faster motor recovery than bupivacaine

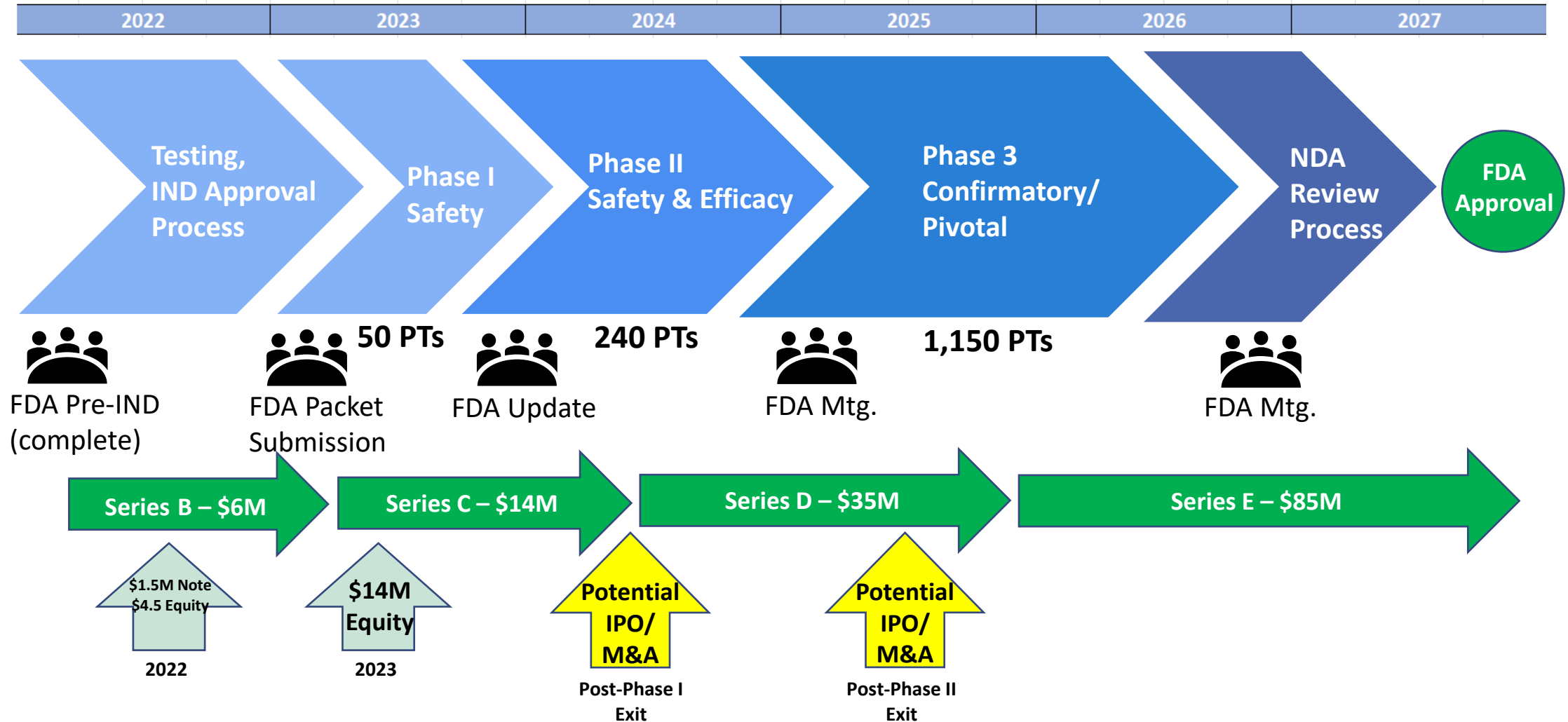
	InSitu Biologics	Pacira Biosciences
	 INSB200™	 Exparel®
120+ hour duration	✓	X
Ropivacaine API (no tox. concerns)	✓	X
Motor function/ fast discharge time	✓	X
Broad PNB indication	✓	X

INSB200™ – Outperforms Exparel® - Rat Model

INSB200™ vs. Ropivacaine HCl and Exparel®
Average API Blood Serum Concentration in Rat



Flagship INSB200™ – Clinical Trials/Timeline/Funding



Intellectual Property

- 17 patents from Cleveland Clinic Foundation
 - Bio-hydrogel technology licensed from CCF through Lifecore Biomedical
 - Exclusive worldwide license for pain management and cancer
- Proprietary Insitu Biologics patents
 - Will provide IP coverage beyond 2040
 - One US patent approved – June 2022 (Hydrogel Delivery Vehicle)
 - 2021/22 applications:
 - January 2021 submission – INSB200™ sustained release focus
 - October 2021 submission – INSB400™ echogenicity and methods focus
 - January 2022 submission – INSB200™ fatty acid/microparticle focus
 - February 2022 submission – INSB400™ cancer therapeutic delivery
 - November 2022 planned submission – INSB200™ reverse-phase carrier focus
- FTO analysis performed by Dentons Davis Brown – no concerns with freedom-to-operate



Pipeline Development

- **INSB400™ - Delivery of Cancer Therapeutics**
 - Discovery-stage – extended release, local delivery
 - Signed NDA/CDA agreement with Mayo Foundation for Medical Education and Research/Mayo Clinic Ventures
 - Covers collaboration work with six Mayo physicians
 - Secured rights to Cleveland Clinic Foundation patents for delivery of cancer therapeutics
 - Submitted three provisional cancer therapeutic patent applications in 2021/2022
- **INSB600™ - Delivery of Antibiotics**
 - Plan to secure rights to Cleveland Clinic Foundation patents for delivery of antibiotics and anti-inflammatories after close of Series B funding
 - In discussions with Mayo Ventures on co-development partnership focused on extended-release product

Funding Overview

Funding To-Date

- Total funding to-date: \$16M
 - \$2.8M in Reg D
 - \$3.1M in Reg A+
 - \$8.5M Series A
 - \$1.5M Note (will conv. to Series B)

Fully Diluted Ownership – Post-Series A

	Shares	% FD
Common Shareholders	5,807,722	32.6%
RSU's and Warrants	134,594	0.8%
Management Option Pool	2,670,995	15.0%
Series A Preferred Shares	7,458,570	41.9%
Series A Warrants	1,734,755	9.7%
Total Shares	17,806,636	100.0%

Series B Round

Q4 2022/Q1 2023

- **\$6M to Approved IND** (*\$1.5M Closed*)
- **+\$14M to Completion of Phase I Trial**
- **Series B use of funds:**
 - Complete GLP studies for FDA IND approval
 - Develop manufacturing process and establish GMP-grade production line
 - Obtain IND approval from FDA for Phase I clinical study
 - Conduct Phase I safety clinical study of INSB200™
 - Development and animal trials on INSB400™ cancer therapeutic product
 - IP purchase of antibiotic technology, initial R&D work, and animal trials for INSB600™ extended-release antibiotic product

The Team – Senior Management



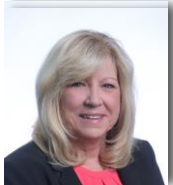
➤ Kevin Bassett, MBA – President and CEO

- Over 20 years experience in medical devices and combination drug/device development
- Former GM of HLT Medical (Bracco), senior Exec. Mgt. roles at various medtech companies



➤ Bill Taylor – Chief Scientific Officer

- Co-founder of Insitu Biologics; inventor of INSB100/200 technology
- Over 20 years experience in medical device and biopharma product development



➤ Kay Warnott, MSN – VP of Clinical/Regulatory

- Over 15 years experience in pharmaceutical industry and pain management sector
- Former Exec. Director of Clinical Research at Pacira Biosciences; consultant for Heron Therapeutics



➤ Kevin Barrett, MBA – Chief Operating Officer

- Extensive experience in senior mgt. medical technology roles focusing on OPS/QA



➤ Mark Ereth, MD – Chief Medical Officer

- 32 years at Mayo Clinic College of Medicine, Prof. Emeritus – 7 yrs., Prof. of Anesthesiology – 25 yrs.
- Conducted or directed over 100 laboratory, animal, or human trials

The Team – Medical Advisory Board



➤ Vanila M. Singh, MD

- Clinical Associate Professor, Stanford University School of Medicine
- Former CMO US Dept. of HHS, Chair of Pain Management Task Force



➤ Jeff Gadsden, MD

- Chief, Division of Orthopedic, Plastic and Regional Anesthesia, Duke University
- Attending Anesthesiologist, Duke Univ. Medical Center



➤ Jake Hutchins, MD, MHA

- Executive Medical Director, M Health Ambulatory Surgery Center
- Anesthesiologist, University of Minnesota Medical Center, Fairview



➤ Mark Ereth, MD

- 32 years at Mayo Clinic College of Medicine
- Conducted or directed over 100 laboratory, animal, or human trials



➤ Mohamad Yaman, MD

- Fellow of the Royal College of Physicians and Surgeons of Canada
- Medical Director – Abu Dhabi Health Services (SEHA), UAE's largest HC Network



Mayo Clinic – Cancer Therapeutics Co-Development Team



➤ Daniel J. Ma, MD, Associate Professor, Consultant

- Department of Radiation Oncology, complex tumors of the head and neck
- Co-Directs The Oropharynx Multi-Disciplinary Clinic



➤ Katharine Price, MD, Prof. of Oncology, Consultant

- Research spans the entire spectrum of cancer, from cancer prevention to developing new treatments for patients with cancer
- Overarching theme is a desire to improve patient lives and improve outcomes



➤ Daniel L. Price, MD, Prof. of Otolaryngology, Consultant

- Expertise in tumors of the head and neck, special interest in skull base tumors
- Reconstruction of the head and neck after treatment of head and neck cancer



➤ Svetomir Markovik, MD, Professor, Consultant

- Development and clinical testing of cancer vaccines, immune-boosting agents, novel agents
- Combination therapy directed at enhancing anti-tumor immune responses

Thank you!



Kevin Bassett, CEO

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