POZ Platform®

Enabling Improvements of Multiple Drug Modalities

Small Molecules

New / improved
small molecule drugs

RNA

Optimized targeting &
reduced immunogenicity

ADCs

Improved delivery of
cancer-killing toxins

serina

April 2025

Non-Confidential

Forward Looking Statements

This presentation contains forward-looking statements that are based on management's beliefs and assumptions and on information currently available to management. In some cases, you can identify forward-looking statements by the following words: "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. These statements involve risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this presentation, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain. Forward-looking statements in this presentation include, but are not limited to, statements about: the potential attributes and benefits of our product candidates; the format, timing and objectives of our product development activities and clinical trials; the timing and outcome of regulatory interactions, including whether activities meet the criteria to serve as registrational; the ability to compete with other companies currently marketing or engaged in the development of treatments for relevant indications; the size and growth potential of the markets for product candidates and ability to serve those markets; the rate and degree of market acceptance of product candidates, if approved; and the sufficiency of our cash resources. We cannot assure you that the forward-looking statements in this presentation will prove to be accurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. Actual performance and results may differ materially from those projected or suggested in the forward-looking statements due to various risks and uncertainties, including, among others: clinical trial results may not be favorable; uncertainties inherent in the product development process (including with respect to the timing of results and whether such results will be predictive of future results); the impact of COVID-19, the post-COVID environment and other factors on the timing, progress and results of clinical trials; our ability to recruit and enroll suitable patients in our clinical trials, including the effectiveness of mitigation measures; whether and when, if at all, our product candidates will receive approval from the FDA or other regulatory authorities, and for which, if any, indications; competition from other biotechnology companies; uncertainties regarding intellectual property protection; and other risks identified in our SEC filings, including those under the heading "Risk Factors" in our Annual Report on Form 10-K and other periodic reports and documents filed with the SEC from time to time. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. The forward-looking statements in this presentation represent our views as of the date of this presentation. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this presentation.

Serina Therapeutics

Next generation drug optimization technology for multiple modalities

- Founders pioneered PEGylation at Shearwater Polymers; $150B in cumulative sales across 32 FDA-approved PEGylated drugs
- Founded Serina to develop the gold standard therapeutic polymer platform for small molecules, RNA and ADCs
- Lead program SER-252 will enter the clinic in 4Q2025 as a de-risked novel treatment for advanced Parkinson's disease – potential $2B peak US sales
- Partnered with Pfizer in the RNA vaccine fields
- Key investor led fundings at Biohaven and Medivation with combined exit value of $25B – Insider ownership of 47%

Presentation Overview

1 Benefits of POZ Platform

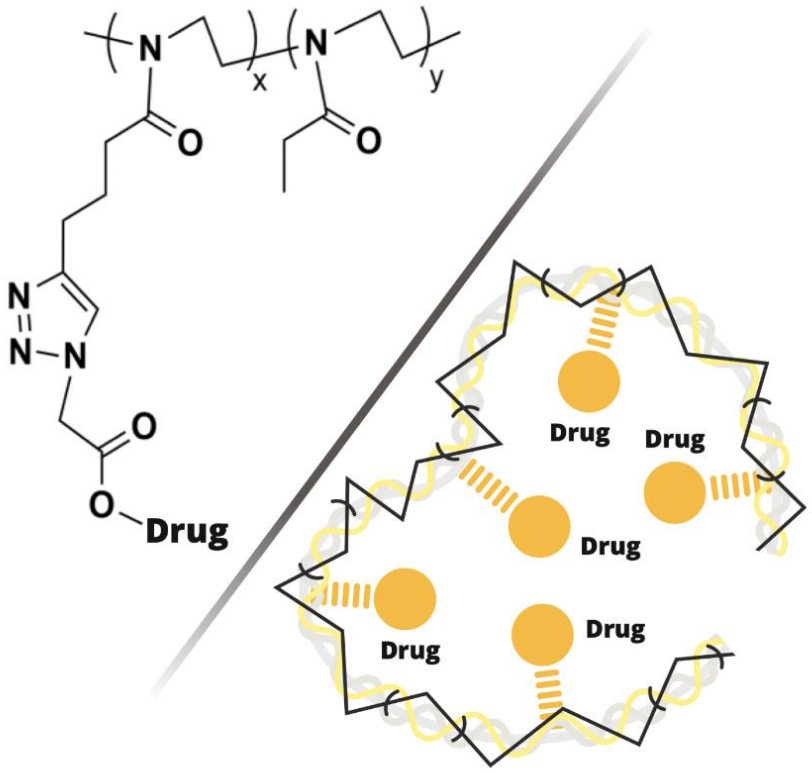
2 SER-252 (POZ-Apomorphine) – Potential best-in-class treatment for Advanced Parkinson's Disease

3 RNA – Broad opportunity across therapeutics and vaccines

4 Milestones and Summary

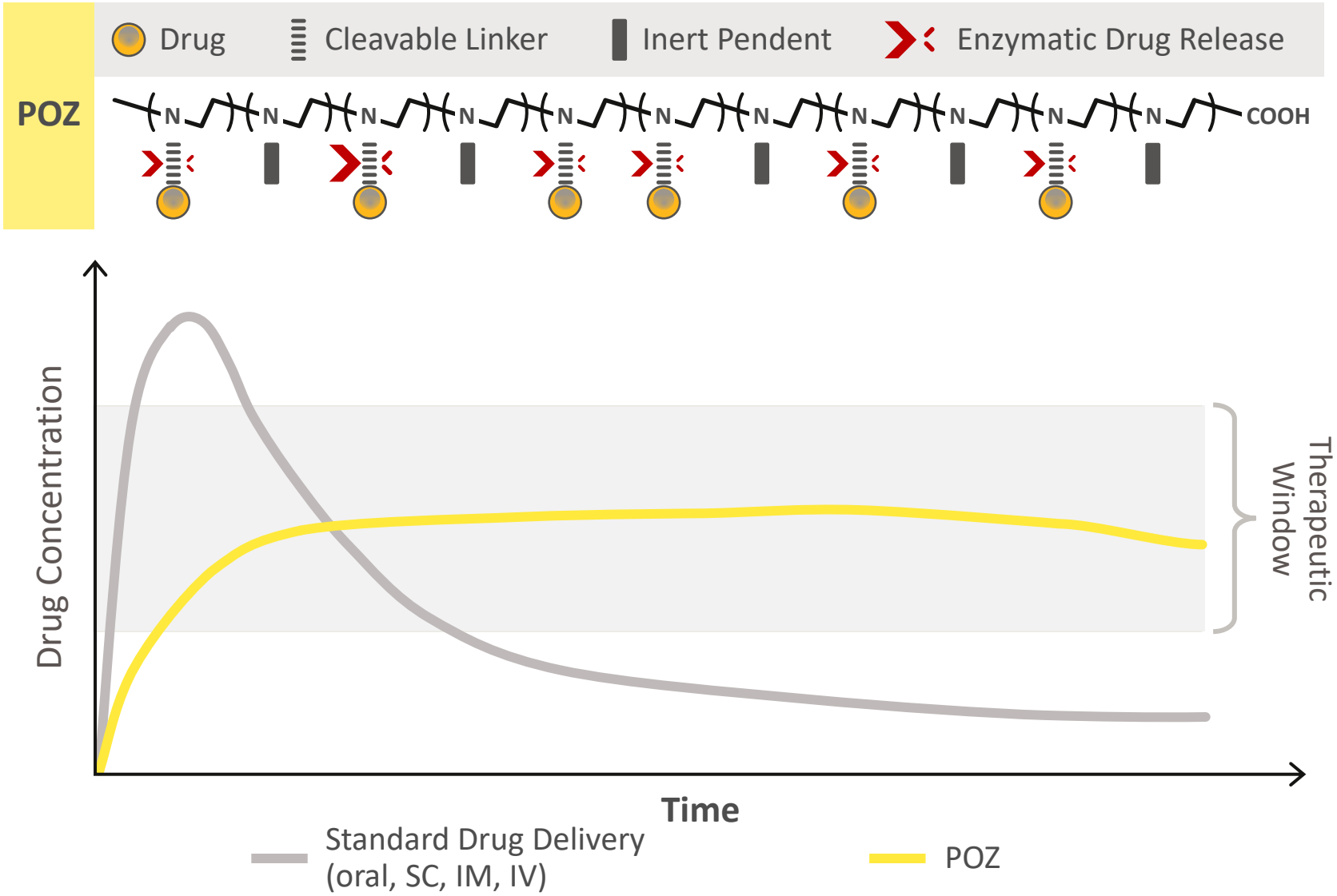
POZ delivers multiple key improvements across multiple modalities

POZ (poly 2-oxazoline) is engineered to address the limitations of other biocompatible polymers



1. **Does not elicit an immune response**
2. **Enables greater drug loading**
3. **Enables continuous delivery with controlled release**
4. **Safe metabolism, clearance and accumulation profiles**
5. **Cost-effective, scalable, safe synthesis and room temp stable**

How Does POZ Accomplish Continuous Drug Delivery?



- Drug is attached to multiple pendent groups via a cleavable linker
- A single plasma enzyme (butyrylcholinesterase) releases the active drug

- **Extends** delivery and administration interval
- **Optimizes** safety / efficacy profile
- **Precision** tuned release profile of drug via linker and drug load
- **POZ** - Designed for small molecules the way PEG was for biologics

‘POZylated’ Small Molecule Candidate Phenotype

Long-acting TPP must have material, KOL-validated clinical benefit

- Convenience / compliance
- Improved efficacy / Reduced SAE profile
  - Clinically de-risked small molecule
  - Drugs with narrow Therapeutic Index/Window
  - Drugs that failed trials due to poor PK and/or PK-related efficacy/safety issues

TPP has $1B+ peak sales commercial opportunity and strategic value

- 505(b)(2) NDA regulatory / clinical pathway

Lead program SER-252

- 1st patient in Ph 1b 4Q2025 - de-risked novel treatment for advanced Parkinson’s disease
- Greater convenience, potential reduced AE profile versus current standard of care
- $2B peak US sales potential

Opportunity for ‘POZylation’ to be a standard for long-acting small molecule development – similar to PEGylation early positioning in biologics

SER-252 (POZ-Apomorphine)

Continuous Dopaminergic Stimulation (CDS) with Best-in-class Potential for Treatment of Advanced Parkinson's Disease

10M
people in the world are currently living with Parkinson's disease

Every 9 mins
A person is diagnosed with Parkinson's disease in the US alone

50+ years
With no major clinical advances – Levadopa standard of care since 1967

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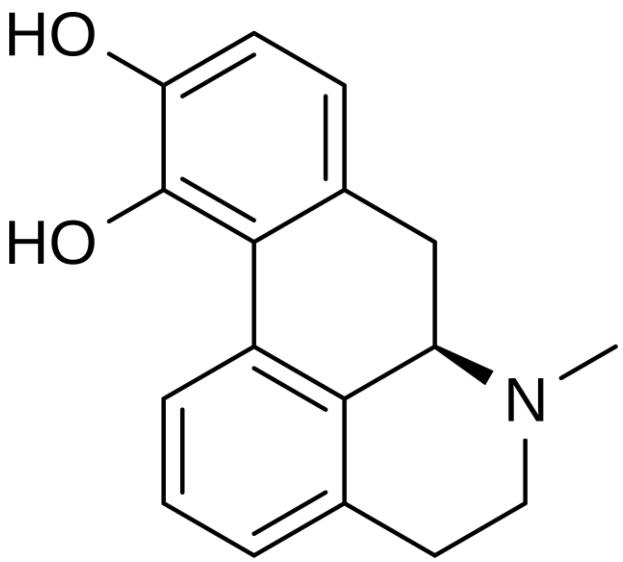
POZ Apomorphine

Optimizing product potential of clinically proven small molecule



- Apomorphine is a strong pan-receptor dopamine agonist
- Similar to levodopa in terms of efficacy, but not dependent on the patient having intact presynaptic machinery to convert levodopa to dopamine and **may be more appropriate than levodopa for advanced patients**
- Adoption of apomorphine as a therapeutic approach has been limited due to: a) **short half life** (requires continuous infusion), and b) **serious adverse local administration site reactions**

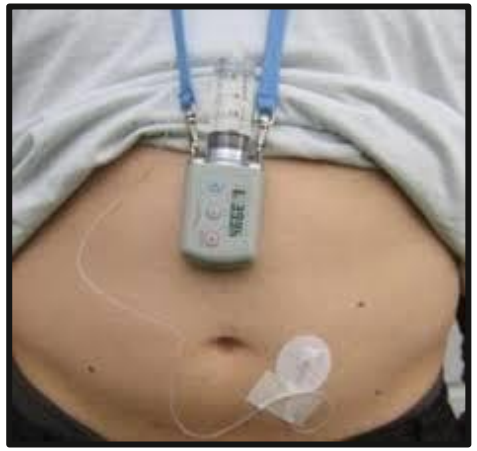
POZ Enables Continuous Delivery of Apomorphine:

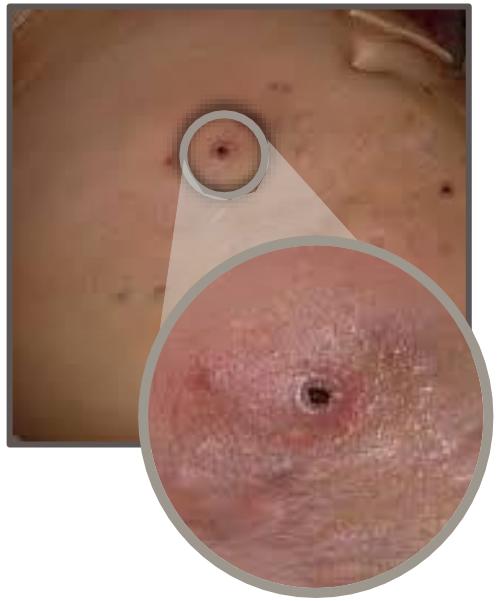
- **Without adverse skin reactions**
- **No need for continuous infusion via electronic pump**

POZ Apomorphine: Addressing Skin Reaction Challenges

No adverse skin reactions in NHPs

Supernus' ONAPGO (APO-go) TOLEDO Study: 31% of 82 Patients had Moderate to Severe Local Site Issues

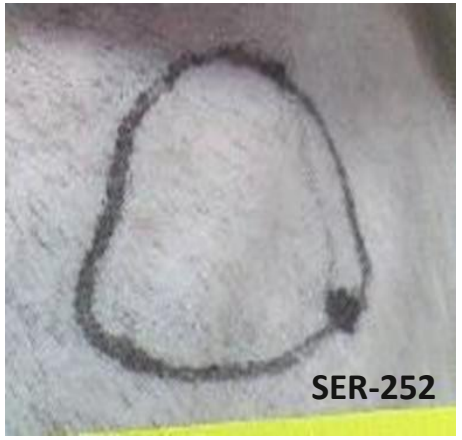




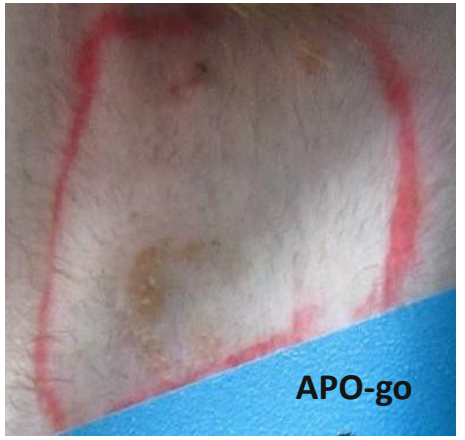
ONAPGO (APO-go)

US FDA approval Feb 2025

PK studies testing eight doses of SER-252 at 15 mg/kg over the course of a month showed no skin reactions



No skin reactions at any time point - biopsy of injection site revealed no inflammation

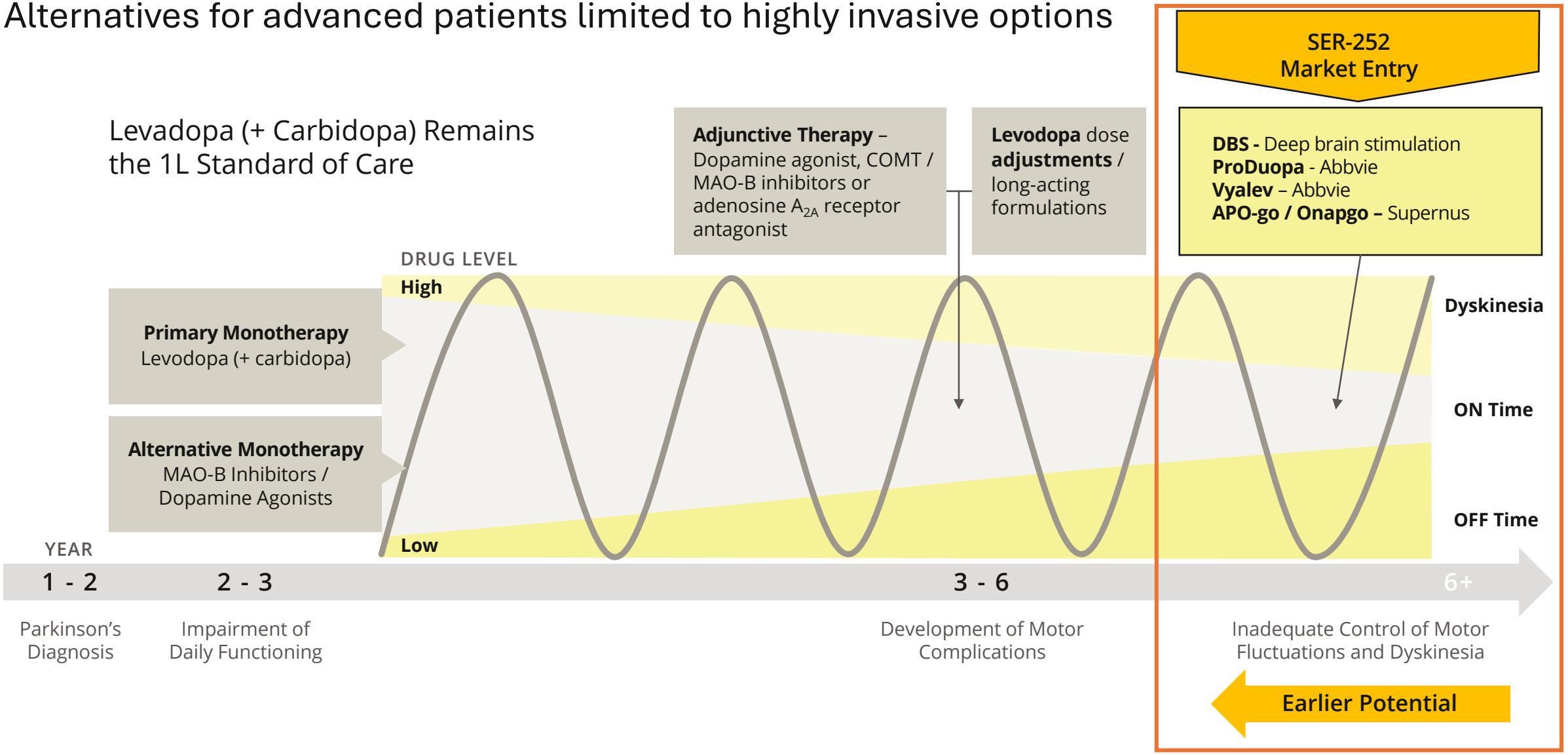


APO-go caused draining skin abscesses in all treated monkeys

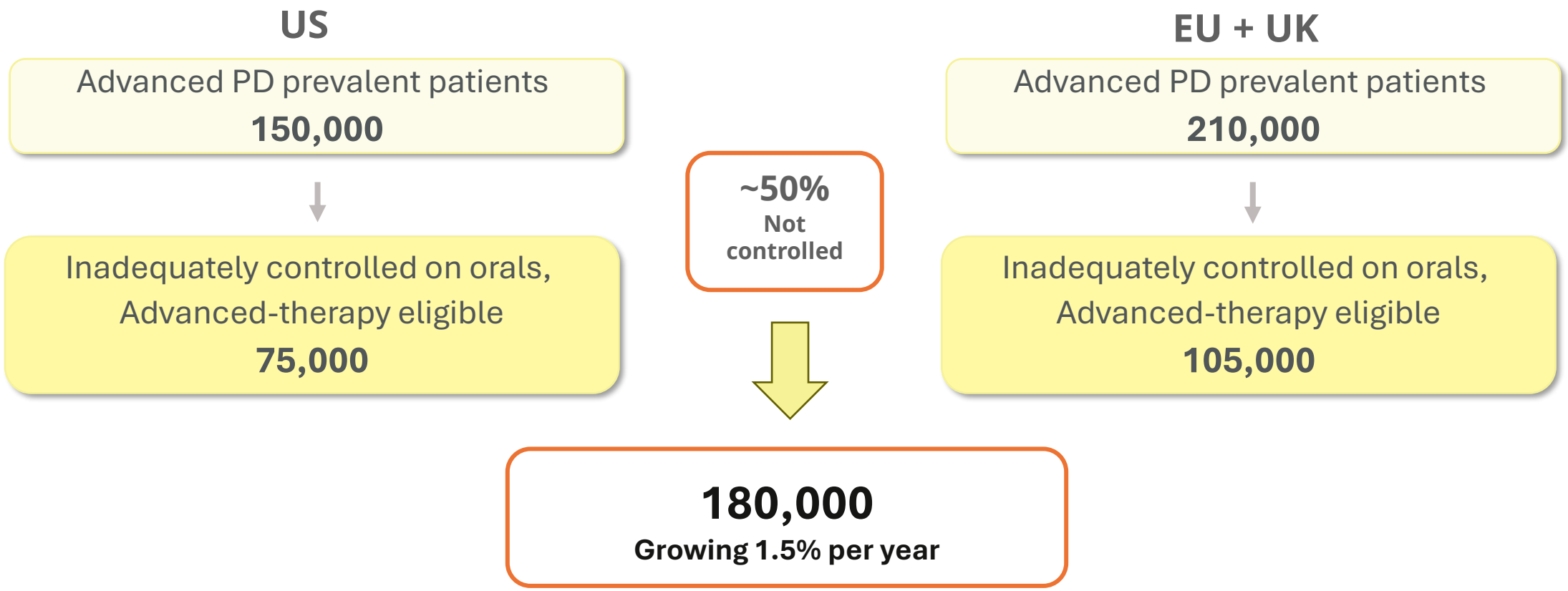
POZ releases free apomorphine only in vascular circulation, not in the sub-q compartment

Patient Journey Inevitably Leads to Inadequate Control

Alternatives for advanced patients limited to highly invasive options



Major Market Opportunity for Advanced Parkinson's Therapies

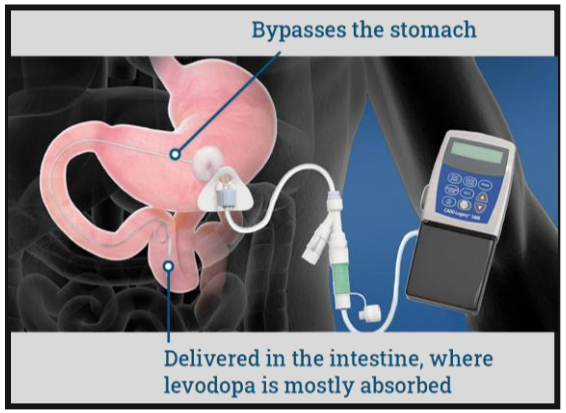


Major Market Patients Inadequately Controlled

1. Parkinson's Foundation, accessed Mar 2024
2. Roche Pharma Day Epidemiological Data 2022
3. Various Analyst Reports from Oct 2019, Feb 2020, Dec 2023, Feb 2024
4. Based on Globe Life Sciences Primary Research

Emerging Products Have Significant QoL Limitations

All Rely on Electronic Infusion Devices That Must Be Worn Daily / Continuously



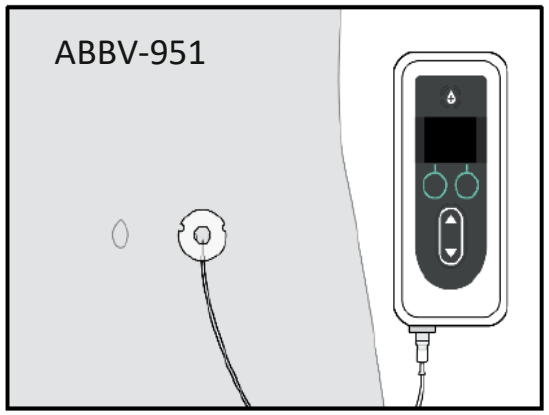
ProDuopa (Abbvie)

levodopa / carbidopa

Requires surgical placement of an intestinal port, patient wears a pump and 5 lb. gel pack during waking hours

$471M in 2023 sales (75% ex-US)
$511M peak sales in 2021

US pricing = $40K/yr/patient (not including surgery / pump)



Vyalev (Abbvie)

foslevodopa / foscarbidopa

SC infusion via an electronic pump generally administered during waking hours, typically over a 16-hour period

FDA approval October 2024
EU/UK approved in 2023

US WAC = $119K/year/patient

Apo-go / Onapgo (Supernus)

apomorphine

SC infusion via an electronic pump worn generally administered during waking hours, typically over a 16-hour period

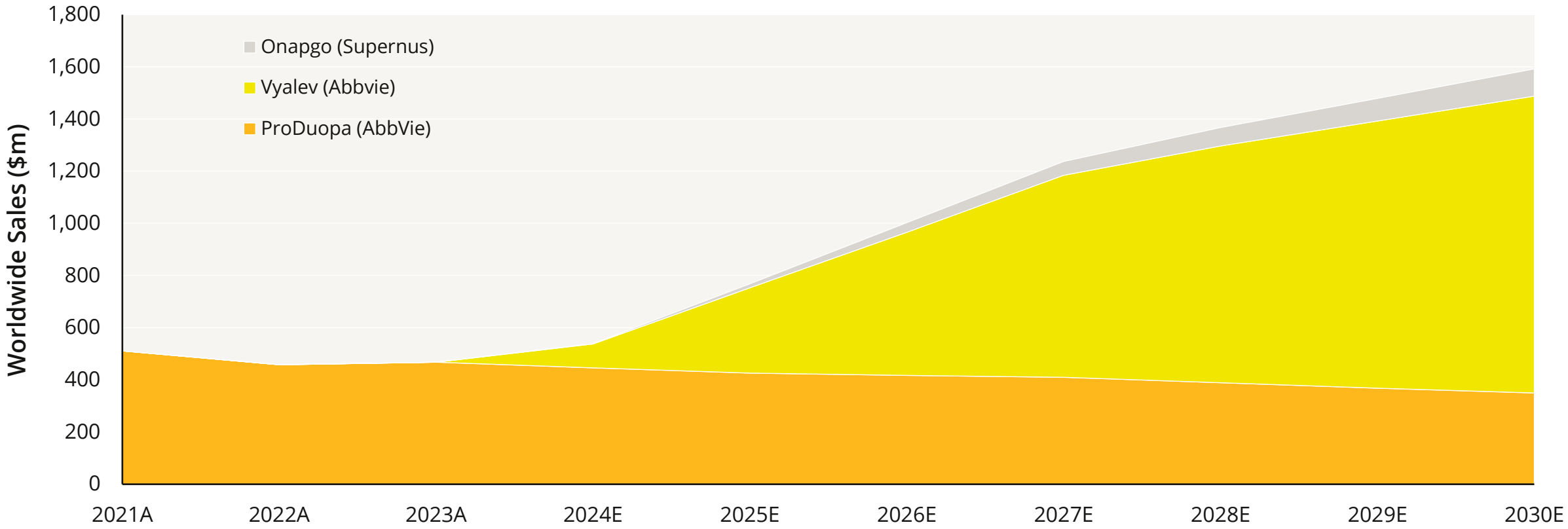
FDA approval February 2025
EU/UK first authorized in 1993

US WAC = likely to track Vyalev

Analysts Project Large Market Emerging for CDS

Despite Highly Invasive Product Profiles

Global Actual and Forecast Sales of Infusion Treatments for Parkinson's Disease[1]



1. Source: Evaluate Pharma, accessed Mar 2024

POZ Apomorphine is Partnered with Enable Injections

Approved[1] 25mL enFuse® device fully enables SER-252's best-in-class product potential

Compact device with no tubing involved

No need for healthcare provider to administer

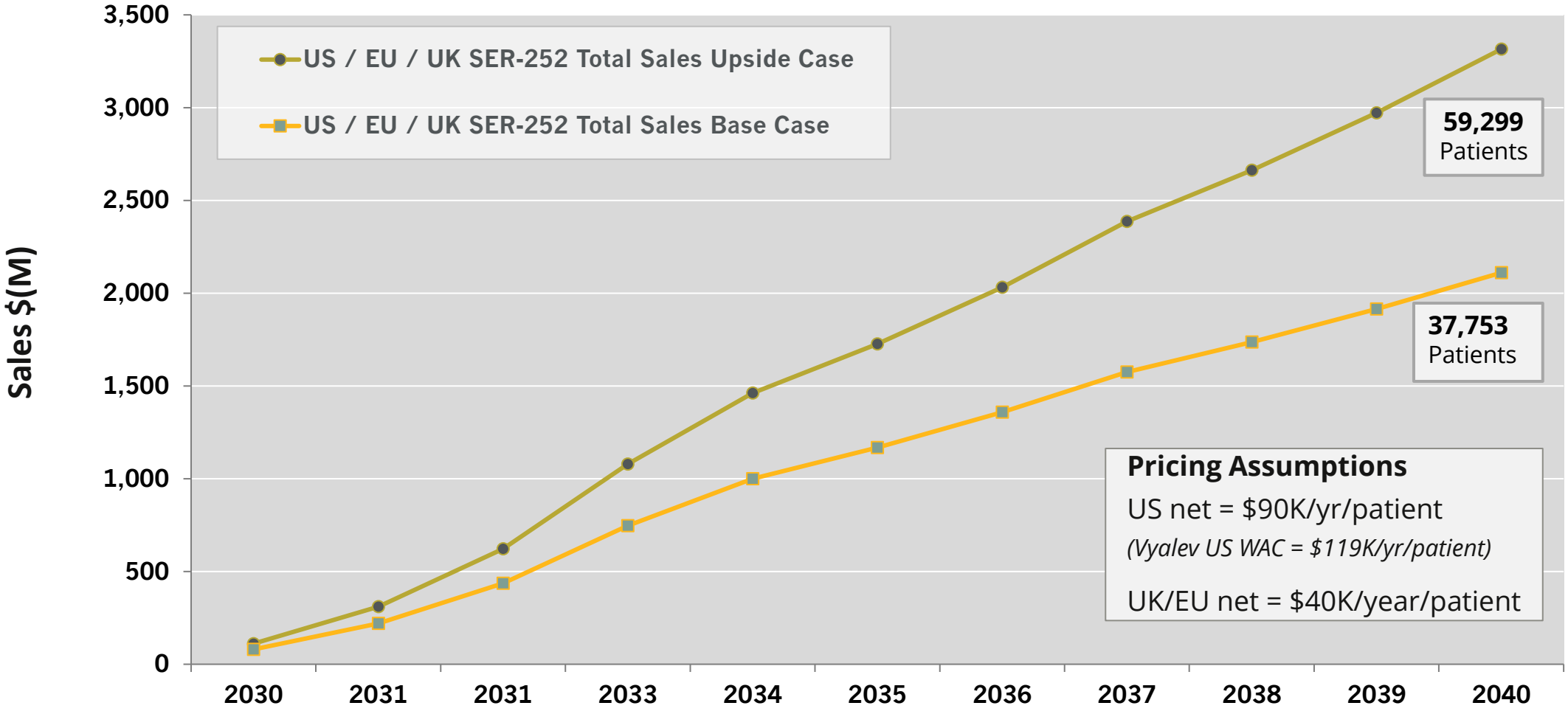
- Vial of SER-252 is pushed on to the port
- Automatically transfers solution and loads the device in less than one minute
- Push button starts injection and pops up when injection is complete – no programming required
- The needle is never seen

Highly Differentiated TPP: Wearable on-body 2x per week for 10 to 15 minutes - versus invasive, continuously worn electronic pump / tubing set

1. Approved in the United States in combination with a specific drug, for more information: https://enableinjections.com/our-products

POZ Apomorphine has Blockbuster Potential

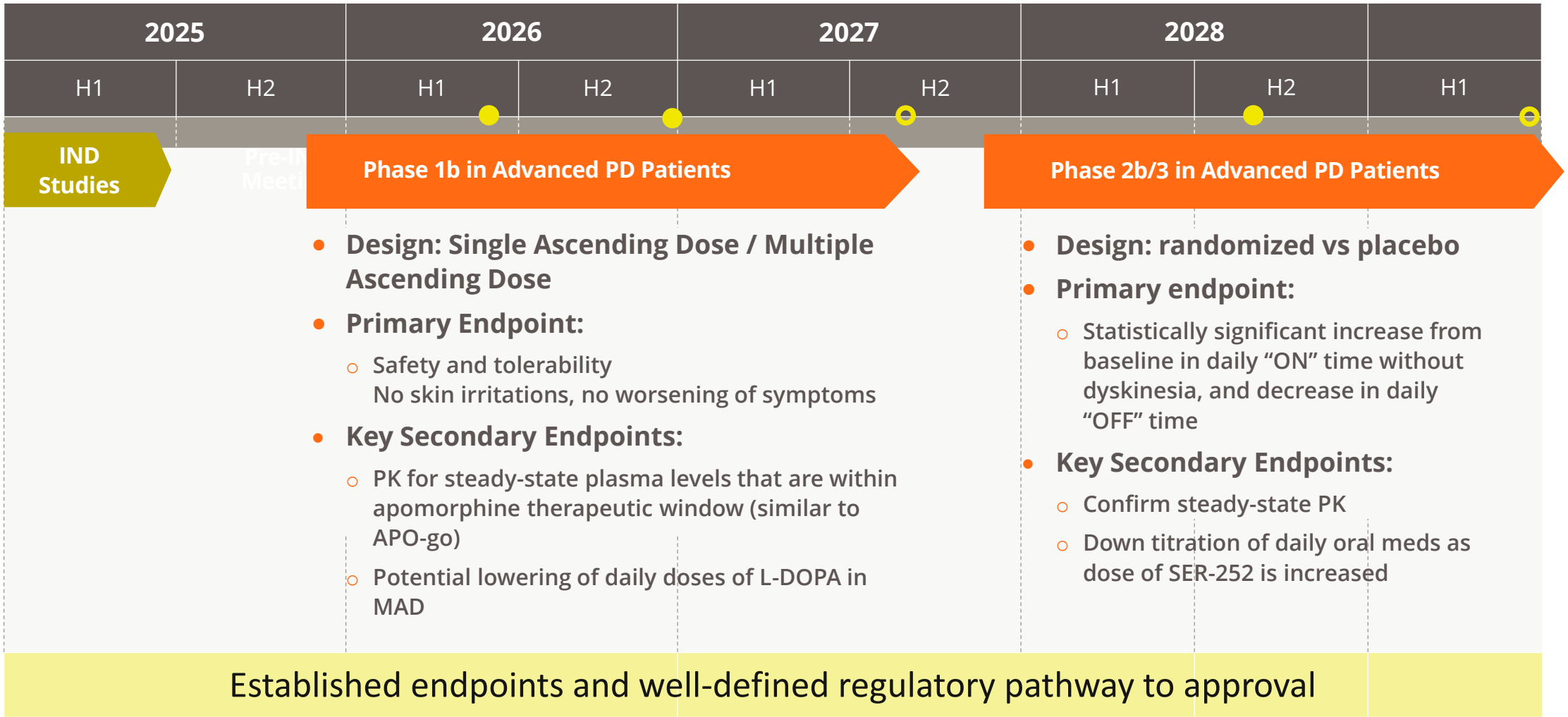
$2.1B to $3.3B Peak Sales Opportunity (US / EU / UK)



505(b)(2) Regulatory Pathway = potential market launch in 2030

1. Globe Life Sciences Primary Research

SER-252 Development Plan



Interim Data
Final Data

Summary POZ apomorphine: Compelling Risk/Reward Profile

Modest capital requirements to reach potentially highly accretive value inflection points

- **Large unmet patient need** – SER-252 potential peak annual sales of **$2.1B to $3.3B**
- **Modest clinical risk –** Apomorphine has US and EU approvals in advanced Parkinson's disease as: 1) "off-state" rescue injection (Apokyn) and, 2) therapeutic infusion drug/device combo for the treatment of motor fluctuations (Apo-go / Onapgo)
- **Highly differentiated TPP** enabled by **POZ + partnership with Enable Injections**
  - 2x per week dosing via SC injection
    - 10 – 15 mins on body (vs. continuously worn, e-pump driven infusion tubing set up)
  - With no troublesome skin reactions at local site administration
- **Phase 1b trial in advanced PD patients provides early efficacy readout**
  - Early readout on adverse skin reactions
  - Interim SAD readout 2H 2026 = key value infection point
- **505(b)(2) NDA potential** – accelerated regulatory pathway potentially provides near term, major value inflection point (visibility 3Q 2025) – efficient time & cost to value

RNA

- A non-immunogenic POZ-based delivery & targeting platform
- Broad Opportunity Across Therapeutics & Vaccines

v1.0 LNP

(PEG alternative)
RNA vaccine platform
licensed to Pfizer

v2.0 LNP

(replaces PEG & ionizable lipid)
RNA therapeutics
immune silent platform

v3.0 LNP

(v2.0 + extrahepatic targeting)
RNA therapeutics platform
with tissue targeting

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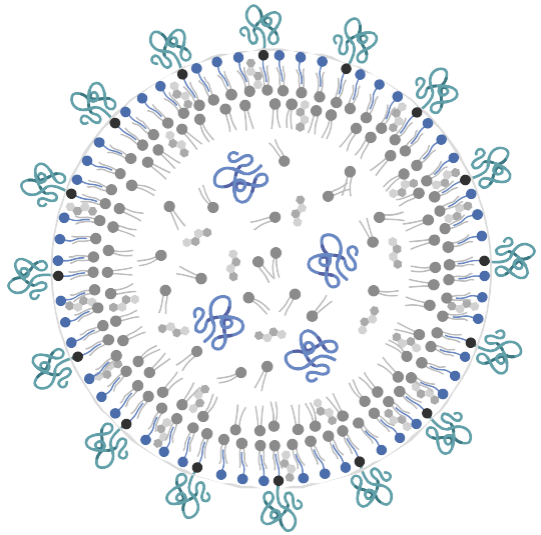
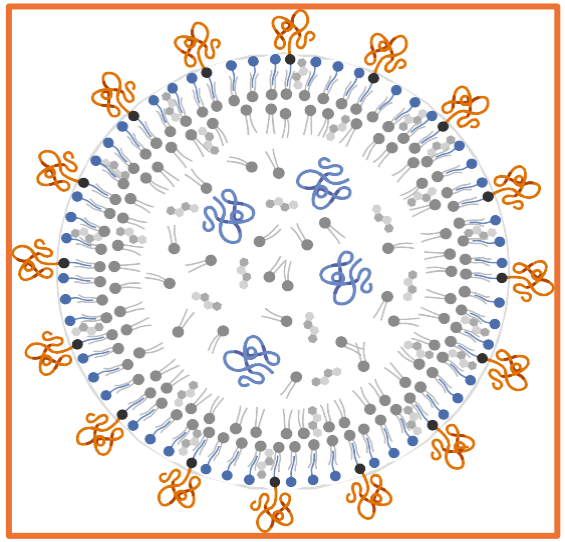
POZ enables RNA products with greatly reduced reactogenicity

Current generation PEG LNP



Ionizable lipid
Cholesterol
mRNA
Phospholipid
PEG-lipid

V1.0 POZ LNP



Ionizable lipid
Cholesterol
mRNA
Phospholipid
POZ-lipid

- Collaborations with pharma partners to **replace PEG-LNPs with POZ-LNPs**
- COVID-19 RNA vaccines data supports **anti-PEG antibodies linked to unwanted reactogenicity** and subsequent reduced uptake

License with Pfizer executed 4Q 2023

- **Non-exclusive / single target**
- **$3M upfront / 3.5% tiered royalties**
- **Pharma and biotech companies seeking alternative to PEG for LNP/RNA delivery**

High Reactogenicity likely due to anti-PEG antibodies

- Anaphylaxis to the mRNA vaccines appears to be due to basophil degranulation, likely the result of high titer IgG (possibly IgM) to the PEG in the formulation
  - Now recognized as an uncommon mechanism of anaphylaxis, first described clinically ~ 15 years ago
- The high titers of IgM & IgG are associated with an increased incidence of reactogenicity (possibly other AEs)
- Serina has developed POZ-dma as a component for LNP formulations
  - Virtually identical in biophysical properties to the PEG-dma LNP (Pfizer/BioNTech formulation) – licensed v1.0 to Pfizer

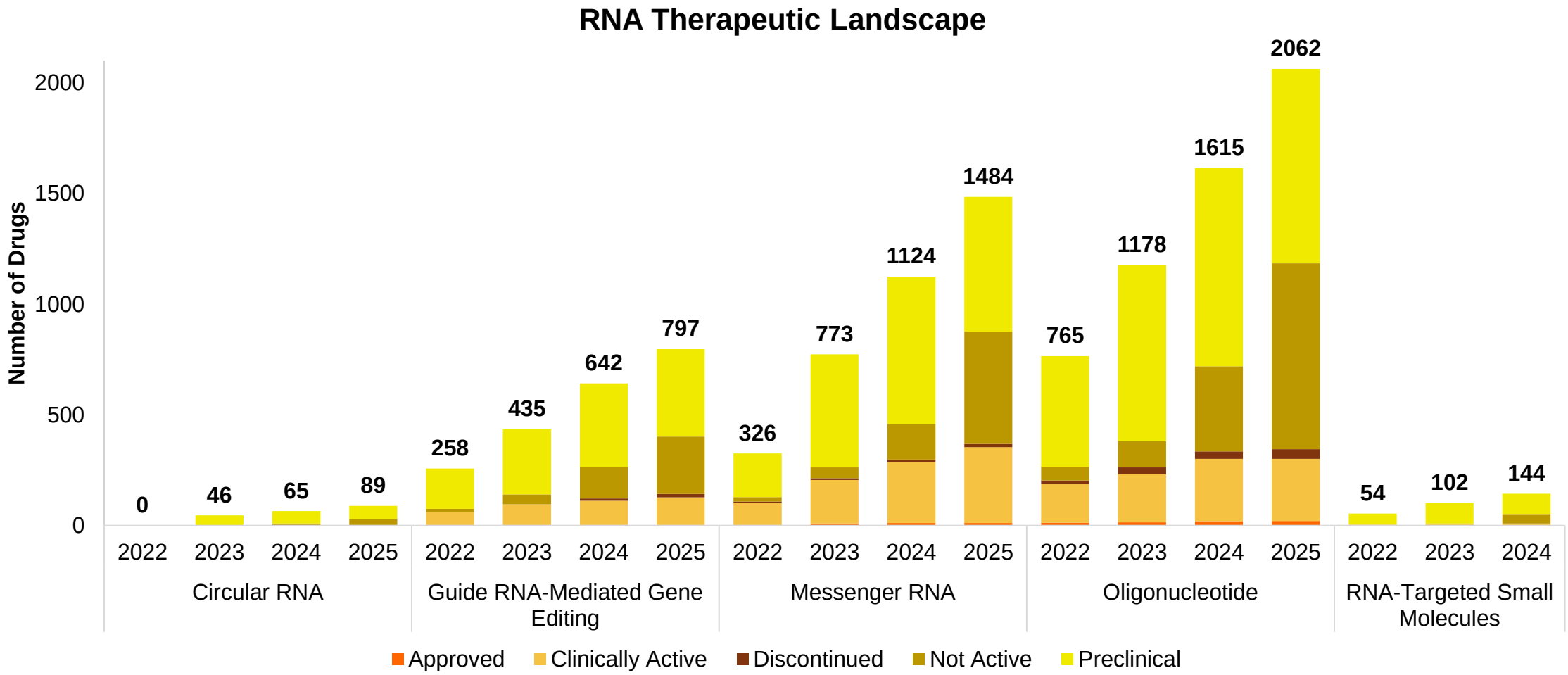
POZ-dma v1.0 LNPs fail to elicit an IgM or IgG immune response on repeat dosing in rats

POZ LNP Strategic Rationale

LNP Built Entirely on POZ Platform

1. Development of superior, proprietary LNP vehicle enables potential to:
   - Stand up an LNP newco focused on developing product assets
   - Broad partnering/licensing opportunity across TA's employing LNP delivered payloads
2. Supported by v1.0 and v2.0 data and development of a "targeting" v3.0
   - **v1.0:** PEOZ-dma demonstrated superiority to PEG-dma / ALC 0315 LNP (the "Pfizer LNP) – (a) immune silent profile, (b) stability of payload at RT, (c) license deal with Pfizer ($3M single target, 3.5% royalty)
   - **V2.0:** developed completely proprietary POZ LNP (replacing PEG and ionizable lipid)
   - **V3.0:** proof of principle targeting chemistry approach being advanced

Rapid Growth in LNP-delivered Drugs



Milestones & Summary

serina

Value-Driving Projected Milestones

Product Development / Data

- 2Q 2025 – IND submission with FDA
- 3Q 2025 – FDA allowance for Phase 1 trial of SER-252 in Advanced Parkinson's
- 4Q 2025 – Initiation of Phase 1 trial of SER-252 in Advanced Parkinson's Disease
- 4Q 2025 – New POZ small molecule conjugate IND enabling studies initiated
- 2Q 2026 – Interim SER-252 Ph 1 readout (injection site reaction)
- 3Q 2026 – Interim SER-252 Ph 1 SAD clinical data readout
- 2Q 2027 – Final SER-252 Ph 1 SAD/MAD clinical data readout

Platform Development / Data

- 1H 2025 - v2.0 preclinical data for POZ platform improvement of RNA delivery
- 2H 2025 – Preclinical data for POZ platform optimization of ADCs

Partnerships

- 2025/26 – POZ platform partnerships in RNA and ADCs

Small Molecule Pipeline

Drug Candidate	Indication	Research	Preclinical	Phase 1	Phase 2	Phase 3
SER-252 (POZ-apomorphine)	Advanced Parkinson's	**IND-enabling studies**				
SER-2xx (POZ-undisclosed)	CNS	**Proof of concept**				
SER-2xx (POZ-undisclosed)	CNS	**Proof of concept**				

Platform Partnering Programs

Drug Candidate	Indication	Research	Preclinical	Phase 1	Phase 2	Phase 3
POZ RNA	RNA therapeutics	**R&D with partners**				
POZ ADC / AOC	Oncology	**Proof of concept**				