



## PALATIN TECHNOLOGIES, INC.

The Role of Melanocortin Receptor Agonists in the Treatment of Ocular Disease

Eyecelerator@ASCRS - April 2022

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# Forward Looking Statements

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The statements in this presentation that relate to future plans, events or performance are forward-looking statements, which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended. Such forward-looking statements involve significant risks and uncertainties, and actual results, events and performance may differ materially from those expressed or implied in this presentation. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements include, but are not limited to, statements concerning the following: (i) estimates of our expenses, future revenue and capital requirements; (ii) our ability to obtain additional funding on terms acceptable to us, or at all; (iii) our ability to advance product candidates into, and successfully complete, clinical trials; (iv) the initiation, timing, progress and results of future preclinical studies and clinical trials, and our research and development programs; (v) the timing or likelihood of regulatory filings and approvals; (vi) our expectations on sales and market acceptance for bremelanotide (Vyleesi®) for hypoactive sexual desire disorder (HSDD), a type of female sexual dysfunction (FSD), including our licensees outside North America jurisdictions; (vii) our expectation regarding timelines for development of our other product candidates; (viii) the potential for commercialization of our other product candidates, if approved for commercial use; (ix) our ability and the ability of our licensees to compete with other products and technologies similar to our product candidates; (x) the ability of third party collaborators to timely carry out their duties under their agreements with us and our licensees; (xi) the ability of contract manufactures to perform their manufacturing activities in compliance with applicable regulations; (xii) our ability to recognize the potential value of our licensing arrangements with third parties; (xiii) the potential to achieve revenues from the sale of our product candidates; (xiv) our ability to maintain product liability insurance at a reasonable cost or in sufficient amounts, if at all; (xv) the retention of key management, employees and third-party contractors; (xvi) the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and technology; (xvii) our compliance with federal and state laws and regulations; (xviii) the timing and costs associated with obtaining regulatory approval for our product candidates; (xix) the impact of legislative or regulatory healthcare reforms in the United States; and (xx) other risks disclosed in our SEC filings. The forward-looking statements in this presentation do not constitute guarantees of future performance. We undertake no obligation to publicly update these forward-looking statements to reflect events or circumstances that occur after the date of this presentation.



# Melanocortin Receptor System Inflammatory & Autoimmune Disease Programs

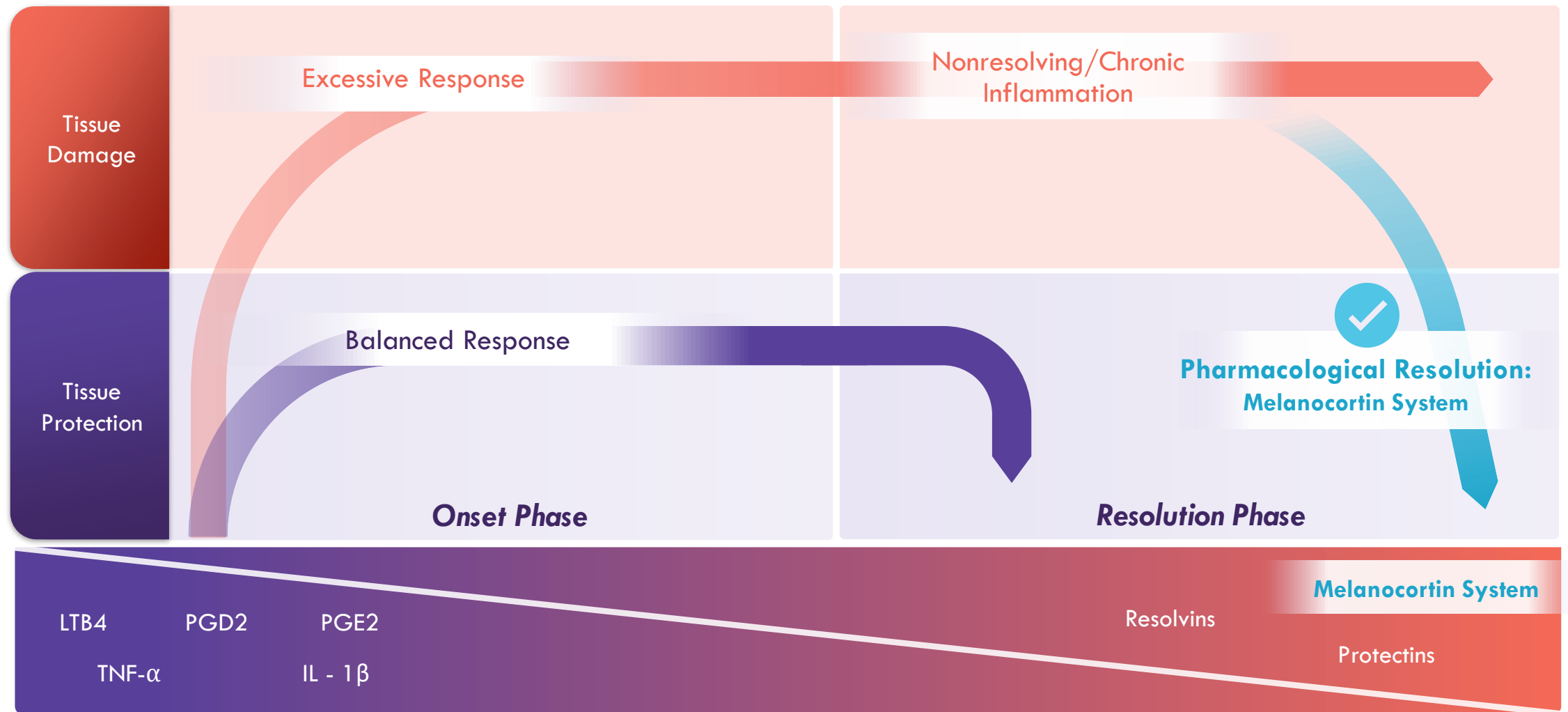


# Melanocortin Receptor Agonist Development Programs; Commercial Product

Development Programs							
Melanocortin Receptor Programs	Pre-clinical	Phase 1	Phase 2	Phase 3	NDA	FDA Approval	Status/Next Steps
<b>PL9643 MCr Agonist</b> Dry Eye Disease							Phase 2 & EOP2 Meeting - Completed Phase 3 Trial Initiated - 4Q2021 Phase 3 Data Expected - 2022
<b>PL9643 MCr Agonist</b> Second Front of the Eye Indication							Finalize Indication Trial Initiation - 2022
<b>MCr Agonist</b> Diabetic Retinopathy							IVT Formulation Under Development
<b>PL8177–Oral MCr1 Agonist</b> Ulcerative colitis (UC)							Phase 2 Trial Initiates – 2Q2022; Data - 2H2022
Commercial Product							
<b>Vyleesi® (bremelanotide)</b> Hypoactive Sexual Desire Disorder							U.S. and ROW Licensee Prospects (Several)

**First melanocortin receptor agonist study in inflammatory indication – Dry Eye Disease.  
Demonstrated positive efficacy, and highly attractive AE profile (Phase 2).  
Initiated pivotal program in December 2021 (Phase 3).**

# The Inflammatory Process in Health and Disease



# Ophthalmic Diseases with Unmet Medical Need: Front to Back

## Conjunctiva/Cornea/Ocular Surface

- Dry eye

## Cornea Endothelium

- Protect donor corneas for transplantation
- Improve corneal transplant survival
- Protection of cornea with cataract surgery
- Fuchs Dystrophy

## Iris/Ciliary Body/Choroid

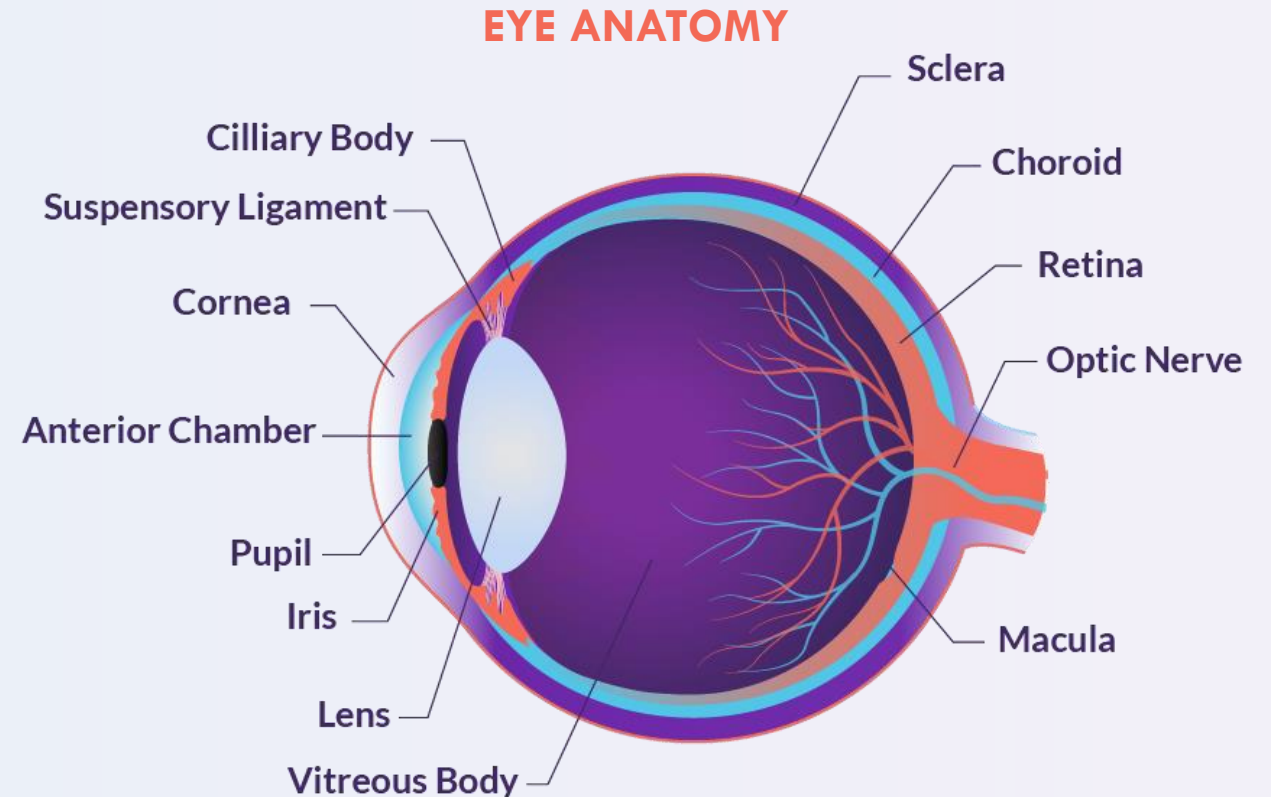
- Non-infectious uveitis

## Retina

- Diabetic retinopathy
- Age-related macular degeneration

## Optic Nerve

- Glaucoma





# PL9643 DED Program Summary

PL9643 is a **differentiated product** ideal for chronic DED treatment with rapid onset of action, superior safety and tolerability, and high ocular comfort.



PL9643 **base patent**, if granted, runs at least to 2041



Phase 2 **study completed** in 2020, met primary objective of data for advancing to registration trials.



PL9643 **treats inflammation** underlying the development and maintenance of DED, addressing both signs and symptoms of DED



In preclinical DED studies, PL9643 **significantly reduced** corneal epithelial damage with effects similar to Restasis, a comparator reference agent



## PL9643 Dry Eye Program



PL9643 Phase 2 DED study was the **1st evaluation** of melanocortin agonist in an ocular inflammatory indication – no drug related AE's, SAE's, or discontinuations.



PL9643 is an **agonist** at the melanocortin 1 receptor (MC1r) and melanocortin 5 receptor (MC5r)



Phase 2 study **achieved statistical significance** in MTOS patients at Week #2 and Week #12 for multiple sign and symptom endpoints, patient segments, and time points.



Phase 3 registrational studies initiated Dec 2021

# PL9643 Dry Eye Phase 2 Results



Met primary objective of providing data required to advance into registration studies



Statistical significance for the primary endpoints was not achieved in the ITT population that included mild, moderate, and severe patients



In the sub-population of moderate to severe patients (N=61), PL9643 achieved statistical significance (P value <0.05 vs. vehicle) at week 2 and week 12 for multiple signs and symptoms



PL9643 demonstrated excellent ocular safety and tolerability

- No drug related serious adverse or adverse events
- No drug related discontinuations
- High ocular comfort



Differentiated & Favorable emerging product profile

- Rapid onset, excellent tolerability, safety and global efficacy

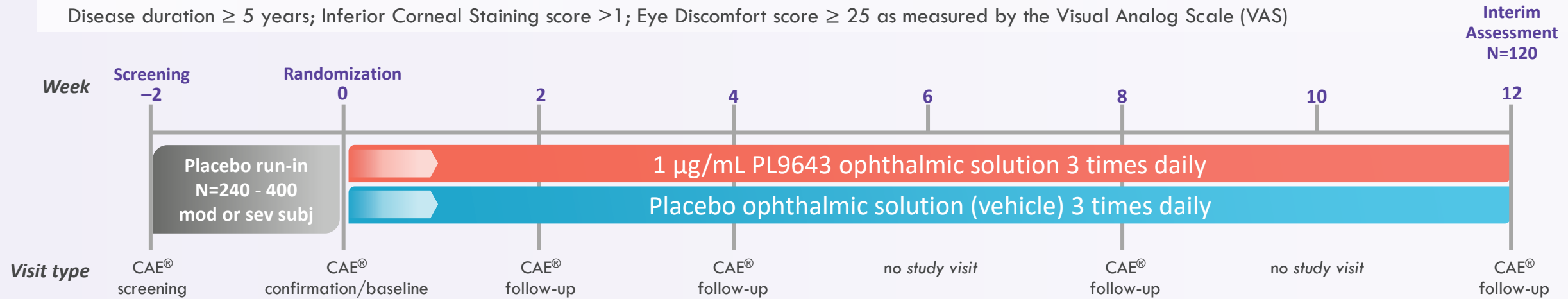


# Phase 3 Study Design and Primary Endpoints

12-week, multicenter, 1:1 randomized, double-masked, vehicle-controlled adaptive design study

Evaluate the **efficacy** and **safety** of PL9643 in up to **400 adults (initial target N=240)** with moderate or severe dry eye disease defined as:

Disease duration  $\geq 5$  years; Inferior Corneal Staining score  $>1$ ; Eye Discomfort score  $\geq 25$  as measured by the Visual Analog Scale (VAS)



## Coprimary Sign Endpts (Week 12)

- Inferior corneal fluorescein staining
- Total conjunctival lissamine green staining (Nasal + Temporal Regions)

## Coprimary Symptom Endpt (Week 2)

- Ocular discomfort

## Key Secondary endpoints (Week 2)

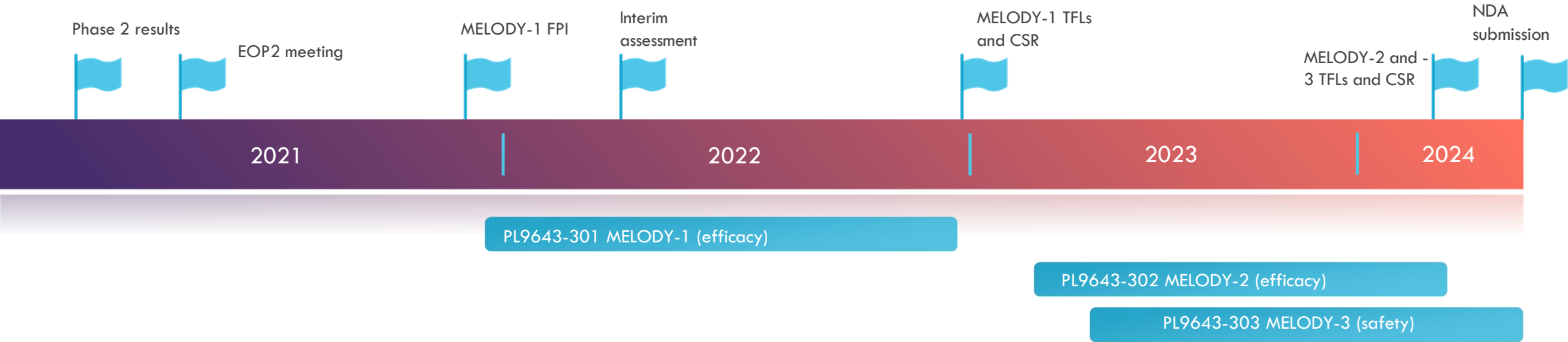
### SIGNS

- Total conjunctival lissamine green staining (Nasal + Temporal Regions)

### SYMPTOMS

- Burning
- Eye discomfort

# PL9643 DED Program Timelines





# Melanocortin System for Retinal Disease

PL9654 Preclinical Diabetic Retinopathy Model

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# PL9654 for Retinal Disorders

The total retinal disorders drug market is valued at USD **\$20 billion** in 2021, and is projected to be **\$27 billion** by end of 2025; DR/DME estimated ~**\$10 billion**

Retinal disorders such as diabetic retinopathy (DR), diabetic macular edema (DME), and AMD can **significantly impair vision** by damage to retinal tissue; **preservation of vision** is the key outcome for research

PL9654 is a **highly potent peptide** melanocortin receptor agonist with potential to dose less frequently (~3-6 months)

## Melanocortin Peptide(s) for Retinal Disorders - Why?

High need for new products with **enhanced safety** and efficacy to delay progression, maintain and improve visual acuity, rescue treatment failures

Market is seeking replacement for steroids **without glaucoma or cataract side effects**

PL9654 is **not systemically absorbed** allowing potential for excellent efficacy without safety concerns

Our melanocortin receptor agonists have been **evaluated in multiple preclinical models** of retinal disease where preservation of vision was demonstrated.

# Conclusions

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- PL9654 demonstrated efficacy in CNV acute retinal damage model and preclinical diabetic retinopathy model
  - Preservation of vision
  - Improved retinal histology
  - Reductions in VEGF and  $\text{TNF-}\alpha$
  - Increase in IL-10
- Efficacy demonstrated with monthly IVT and daily SC administration
- IVT formulation in development to support clinical studies
- The melanocortin pathway may provide a much-needed alternative to anti-VEGF and steroid therapies in retinal disease

THANK YOU.

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