

Palatin Technologies, Inc. NYSE American: PTN

CORPORATE PRESENTATION OCTOBER 2021

Carl Spana, Ph.D. President & CEO

Stephen T. Wills, CPA/MST CFO / COO

#### **Forward Looking Statements**

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.



## Pioneering a novel mechanism and approach to treating inflammatory & autoimmune diseases with a focus on ocular indications



Demonstrated expertise moving programs from discovery to FDA approval



Expertise in the biology and chemistry of the melanocortin system First company to procure FDA approval for a melanocortin agent (Vyleesi<sup>®</sup>)

$\boldsymbol{\mathcal{C}}$	ð
	Ż

Strategy leverages our chemistry and biology across multiple therapeutic opportunities

MOAs with the potential to modify underlying disease pathologies - not just treat symptoms



## Programs

Pipeline							
Melanocortin Receptor Programs	Pre-clinical	Phase 1	Phase 2	Phase 3	NDA Submission	FDA Approval	Status/Next Steps
<b>PL9643 MCr Agonist</b> Dry Eye Disease							Phase 2 Dry Eye trial started 1Q2020 Positive Data 4Q2020 Phase 3 trial to be initiated 2H2021 Phase 3 data expected 1H/2H2022
<b>PL9643 MCr Agonist</b> Second Front of the Eye Indication							Evaluating several indications Trial initiation targeted for 1H2022
<b>MCr Agonist</b> Diabetic Retinopathy Non-Infectious Uveitis							IVT Formulation under development
PL8177 MC1r Agonist (Oral) Inflammatory Bowel Disease							Phase 2 trial for ulcerative colitis to be initiated 2H2021 with data 2H2022
<b>Vyleesi<sup>®</sup> (bremelanotide)</b> Hypoactive Sexual Desire Disorder							FDA Approval 2Q2019 Seeking U.S. and ROW licenses
Natriuretic Peptide Receptor Programs	<b>Pre-clinical</b>	Phase 1	Phase 2	Phase 3	NDA Submission	FDA Approval	Status/Next Steps
<b>PL3994 NPR-A</b> Cardiovascular Disease							Entered Phase 2a clinical trial supported by a grant from the American Heart Association in 2H2020
PL5028 NPR-A/C Agonist Cardiovascular and Fibrotic Diseases							Completed preclinical work Evaluating options



## Milestones

Melanocortin System Inflammatory & Autoimmune Disease Programs	Initiation	Data
PL9643 – Dry Eye		
IND	4Q2019	
Phase 2	1Q2020	4Q2020
Phase 3 (Melody 1)	2H2021	1H/2H2022
Phase 3 (Melody 2 & 3)	1H/2H2022	2H2023
PL8177 – Ulcerative Colitis		
Phase 2 Ulcerative Colitis Proof-of-Concept	4Q2021	2H2022
PL9643-2 <sup>nd</sup> Front of Eye Indication		
Phase 2 Proof-of-Concept	1H2022	2H2022
MCR Agonist-Retinal indication		
Proof-of-Mechanism DR/DME	2022	2023
Natriuretic Peptide System Cardiovascular & Fibrosis Programs	Initiated	Data
PL3994 – Heart Failure		
Open Label Phase 2a HF-pEF Patients	2H2020	2H2021
Vyleesi (bremelanotide) for Hypoactive Sexual Desire Disorder		Status/Completion
North American Rights Regained		3Q2020
China Licensee PK Study / S. Korea Licensee PK Study		2H2021
Seeking U.S. and ROW Partnerships		2H2021-2022



Melanocortin Inflammatory & Autoimmune Disease Programs Pioneering a new way to patients

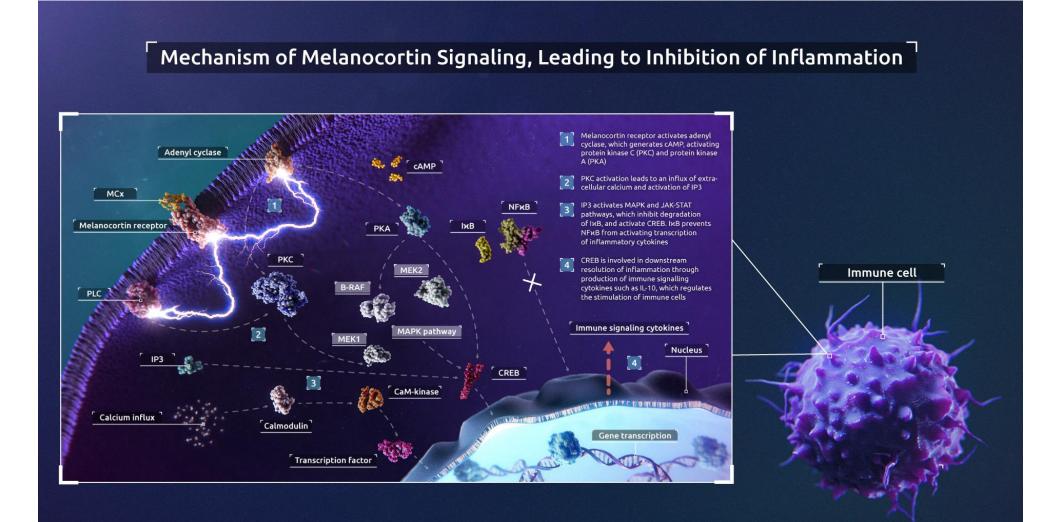


### Immunological Effects of Melanocortin System

- Melanocortin system is up-regulated by and integral to the resolution of autoimmune pathologies
- Modulates the activity of cells of the immune system
- Activated during disease state
- Activates resolution of proinflammatory processes
  - Reduces NF-κB and other pro-inflammatory cytokines (IL-1, IL-2, IL-4, IL-6, IL-13, TNF-α, IFN-γ)
  - Increased production of IL-10, an anti-inflammatory cytokine
  - Mediates antigen specific T-cell and macrophage responses from pro-inflammatory to regulatory
- MC1R specific peptides and small molecules have demonstrated in vivo activity in numerous disease models of inflammation



### Mechanism of Action of Melanocortins





#### Melanocortin Anti-inflammatory Program

## Rational design and synthesis of selective MC1R & MC1/5R agonists

PL8177: cyclic peptide selective MC1R agonist PL9643: cyclic peptide MCR agonist

#### Reversal of pathology in multiple inflammatory and autoimmune disease models

Including inflammatory bowel disease, dry eye, uveitis, diabetic retinopathy & nephritis and pulmonary fibrosis

#### PL8177 Phase 2 clinical development candidate for indications requiring local or systemic administration

Oral formulation: Phase 2 for ulcerative colitis FPI 2H2021 Preclinical data in bleomycin pulmonary fibrosis model

#### Multiple opportunities for ocular indications

PL9643 topical DED

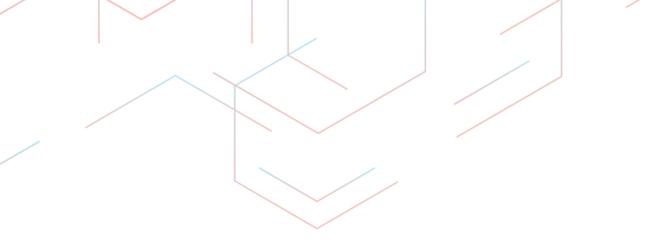
- Positive Phase 2 data
- Progressing to registrational studies

PL9643 topical for 2<sup>nd</sup> front of eye indication

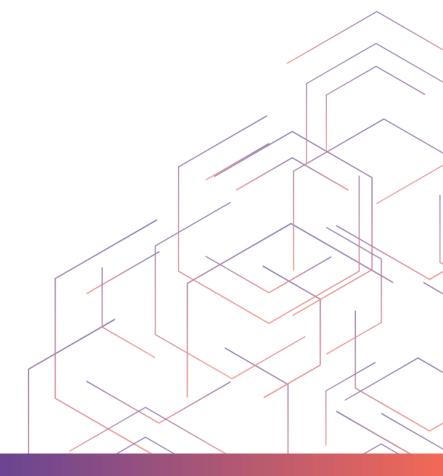
PL8177 SC non-infectious uveitis Orphan designation

Candidate in IND-enabling activates for retinal indications





# Ocular





### **Ophthalmic Diseases: Front to Back**

#### Conjunctiva

Seasonal allergic Vernal (Orphan) Atopic (Orphan)

#### Conjunctiva/Cornea/Ocular surface

Dry eye

#### **Corneal Epithelium**

Toxicity from chemotherapy (Orphan)

#### Cornea endothelium

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

#### Ciliary Body

Glaucoma therapy

#### Iris/Ciliary Body/Choroid

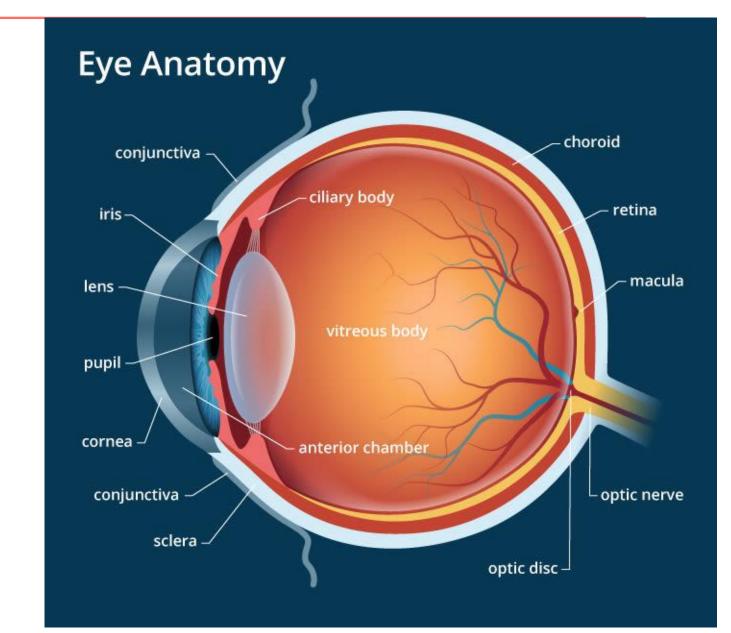
Non-infectious uveitis

#### Retina

Diabetic retinopathy Age-related macular degeneration

#### Optic nerve

Neuro-protection in glaucoma



## Ophthalmic Diseases: Unmet Medical Needs

REGION OF THE EYE	INDICATION	UNMET NEED
	Seasonal Allergic	Minimal unmet need
Conjunctiva	Vernal (orphan)	One product approved
	Atopic (orphan)	Need for steroid-sparing agent
Conjunctiva/Cornea/Ocular surface	Dry eye	Huge market, tolerability is lacking
Corneal Epithelium	Toxicity from chemotherapy (Orphan)	Life-saving
	Protect donor corneas for transplantation	Unique indication
Corneg endothelium	Improve corneal transplant survival	Unique indication
	Protection of cornea with cataract surgery	Huge market, no therapies exist
Ciliary Body	Glaucoma therapy	Huge market, demand for new class of drugs, safety profile

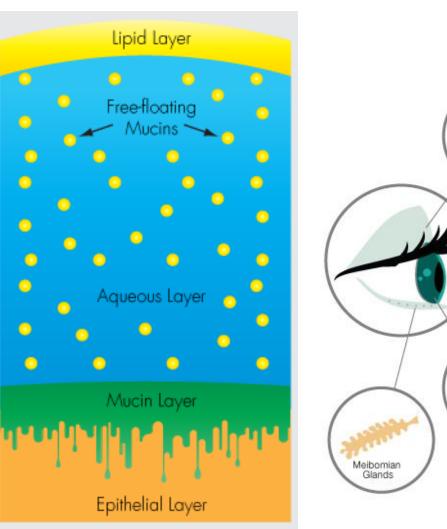


## Ophthalmic Diseases: Unmet Medical Needs

<b>REGION OF THE EYE</b>	INDICATION	UNMET NEED
Iris/Ciliary Body/Choroid	Non-Infectious Uveitis	Need steroid-sparing therapy
	Diabetic retinopathy	Largest market
Retina	Age-related macular degeneration	Largest market
Optic nerve	Neuro-protection in glaucoma	Unique



### Dry Eye Overview



- Lacrimal Gland Goblet Cells
- Dry eye disease (DED) or keratoconjunctivitis is a multifactorial disorder of the tears and ocular surface
- Symptoms include dryness, irritation, redness, discharge and blurred vision
- Inflammation plays a prominent role in the development and amplification of the signs and symptoms of DED
- Current Treatments >\$2 billion in revenue
  - Restasis<sup>®</sup>-topical cyclosporin
  - Xiidra<sup>®</sup>-topical integrin inhibitor
  - Topical steroids
  - Artificial tears
- Current treatments have efficacy and tolerability issues and there remains a high medical need for new innovative treatments that affect underlying disease processes



#### DED - One of the Most Common Eye Diseases in the United States<sup>1</sup>



#### **AMERICAN ADULTS** suffer from symptoms of DED<sup>2,3</sup>



1. Stern ME et al. Int Rev Immunol. 2013;32(1):19-41. 2. Lemp MA. Am J Ophthalmol. 2008;146(3):350-356. 3. Patel VD et al. Curr Med Res Opin. 2011;27(5):1041-1048.

### PL9643 Dry Eye Program

- PL9643 represents a novel approach to treating Dry Eye Disease (DED) by targeting the ability of the MS to resolve pathological inflammation
  - PL9643 treats inflammation underlying the development and maintenance of DED, addressing both signs and symptoms of DED
- PL9643 is an agonist at the melanocortin 1 receptor (MC1r) and melanocortin 5 receptor (MC5r)
- PL9643 base patent runs to 2041
- Preclinical, DED studies PL9643 significantly reduced corneal epithelial damage with effects similar to Restasis<sup>®</sup>, a comparator reference agent
- Phase 2 study completed 2020
  - Positive study
  - 1<sup>st</sup> evaluation of MS agonist in ocular inflammatory indication



### PL9643 Dry Eye Phase 2 Strategy

- Multi-center phase 2 RCT comparing PL9643 to placebo in DED patients with a 12-week treatment period
- Co-primary end points, a sign and symptom of DED
  - Sign: improvement in inferior fluorescein staining at week 12
  - Symptom: ocular discomfort measured at week 12
- Phase 2 study was exploratory with evaluations of multiple sign and symptom end points, patient segments, and time points
- Multiple outcomes can support a successful phase 2 DED study
  - Statistical significance for both co-primary end points
  - Statistical significance inferior fluorescein staining and a secondary symptom end point
  - Statistical significance ocular discomfort and a secondary sign end point
- Phase 3 registrational studies will need to achieve statistical significance on co-primary end points of a sign and symptom of DED

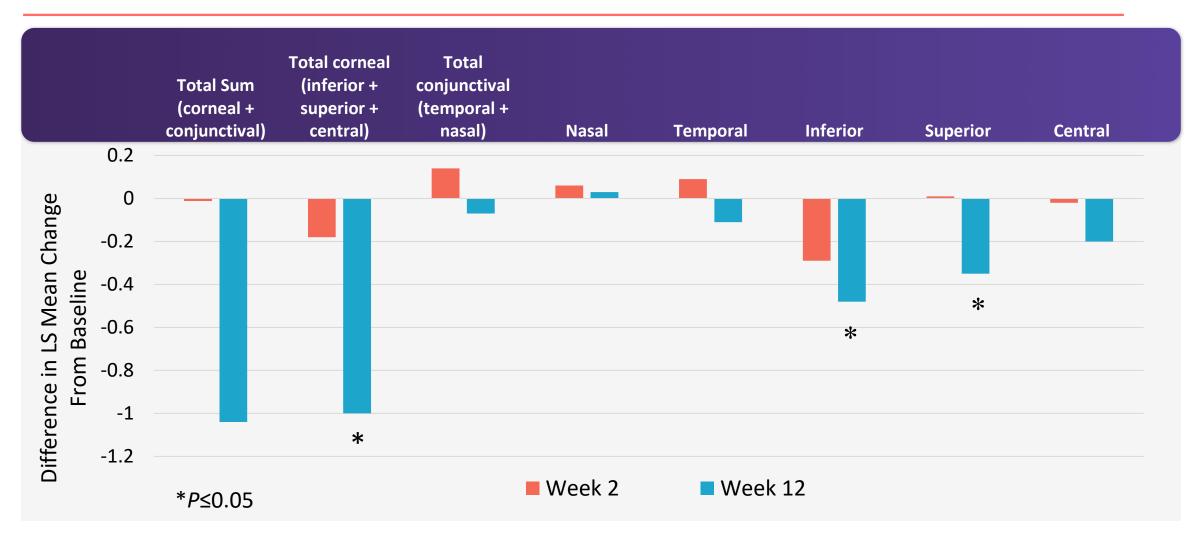


#### PL9643 Dry Eye Phase 2 Results

- 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</li>
- PL9643 demonstrated excellent ocular safety and tolerability
  - No drug related serious adverse or adverse events
  - No drug related discontinuations
  - High ocular comfort
- Favorable emerging product profile
  - Rapid onset, well tolerated and global efficacy



# Difference between PL9643 & Placebo for Corneal Fluorescein Staining Patients with Moderate or Severe Disease



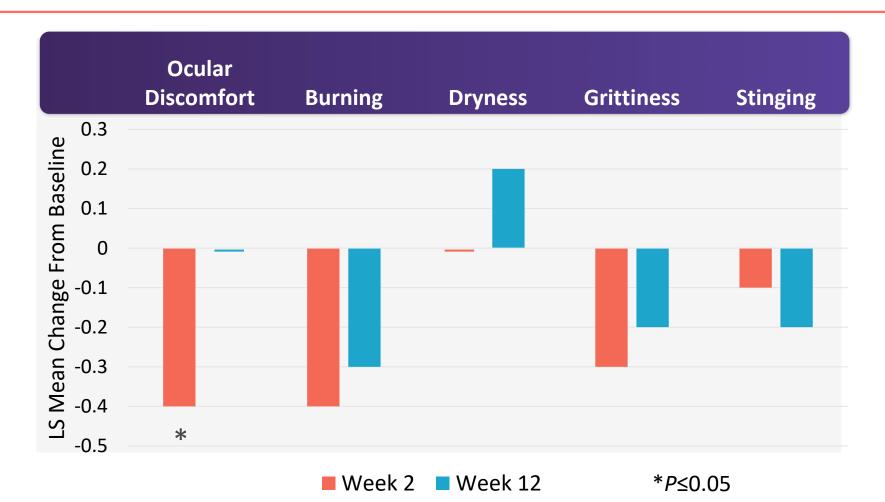
In patients with moderate or severe disease significant improvement was observed for PL9643 compared with placebo for the primary endpoint of inferior corneal fluorescein staining (P < 0.05)

Differences between PL9643 & Placebo in Conjunctival Redness and Tear Film Break-up Time Patients with Moderate or Severe Disease



Signs of conjunctival redness showed numeric improvements (as demonstrated by negative change from baseline) and tear film break-up time showed significant improvement at 12 weeks

Differences between PL9643 & Placebo Ora Calibra<sup>®</sup> Ocular Discomfort & 4-Symptom Questionnaire<sup>+</sup> Score's patients with Moderate or Severe Disease



PL9643 demonstrated significant improvement in ocular discomfort over placebo at Week 2 (as shown by negative change from baseline)

†Measured on 0-5 continuous scale

DED is estimated to affect over 20 million people in the United States

- Majority of people suffering from DED are in the moderate to severe category (>75%)
- Most patients have persistent disease (>5yrs)

Existing therapies for dry eye disease generally regarded as inadequate by many physicians and patients

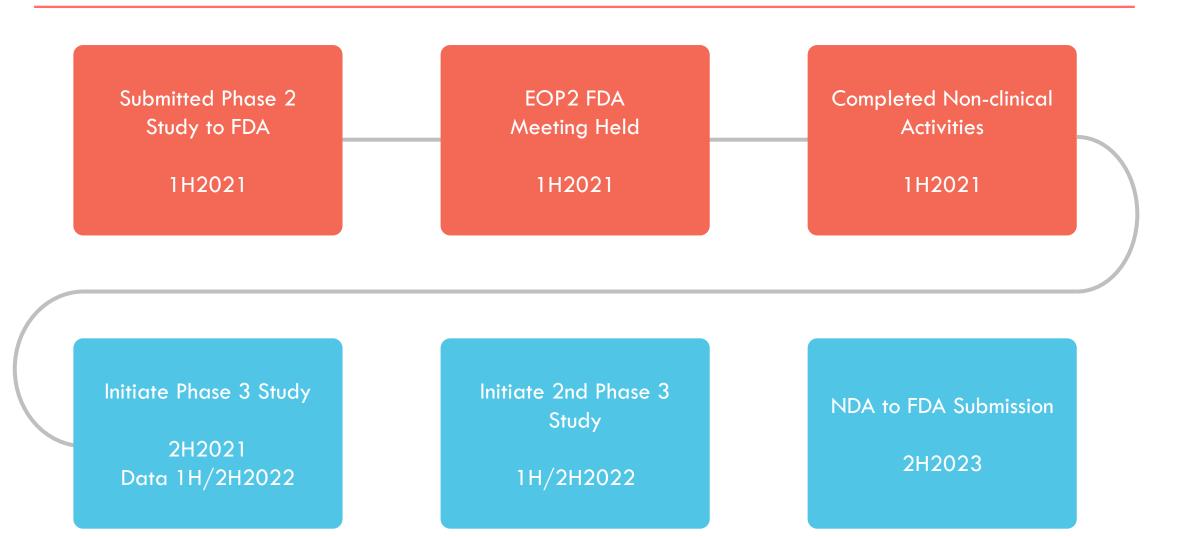
- Limited clinical trial evidence for both signs and symptoms
- Require weeks or months to demonstrate activity
- High discontinuation due to due to slow onset, lack of efficacy and high rates of side effects

PL9643 has a favorable commercial product profile / Differentiating factors to current approved therapies

- Quick onset of efficacy
- Excellent tolerability profile



#### PL9643 Dry Eye Disease Development – Status/Next Steps



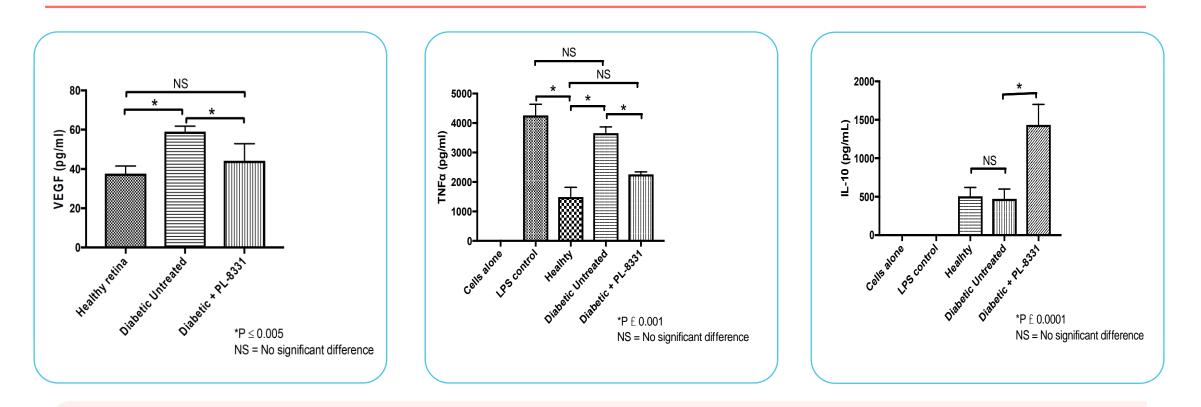


#### Diabetic Retinopathy & Macular Edema

- By 2050, the number of Americans with diabetic retinopathy is expected to nearly double, from 7.7 million to 14.6 million
- DME affects  $\sim 10\%$  of people with diabetic retinopathy
  - $^\circ$  ~750,000 in the USA & 2.2 million people in the EU
- IVT VEGF antagonists and steroids are the main treatments for DME
  - Annual global sales for DR/DME estimated at \$1.85b
- There is a high need for additional treatments
  - To delay progression, maintain and improve visual acuity
  - Replacement for steroids without glaucoma or cataract side effects
- Our melanocortin agonist have been evaluated in multiple animal models of retinal disease



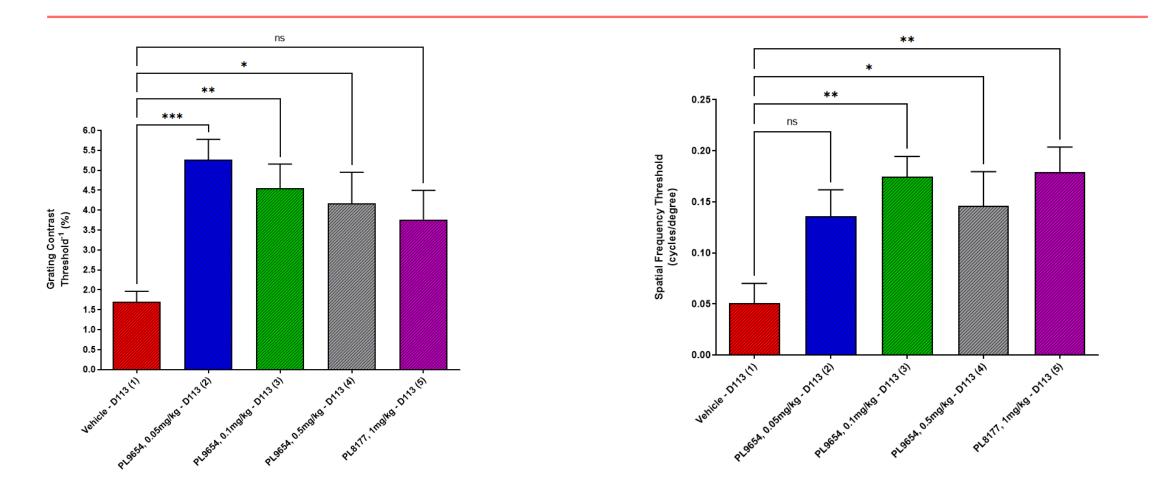
#### Streptozotocin Diabetic Mouse Model



- PL8331 is a melanocortin receptor agonist
- VEGF and TNF- $\alpha$  levels are similar to healthy mice even though the diabetic mice remain hyperglycemic throughout the study
- IL-10 is a marker of inflammation resolution



#### Melanocortin Agonists Preserve Contrast Vision and Acuity



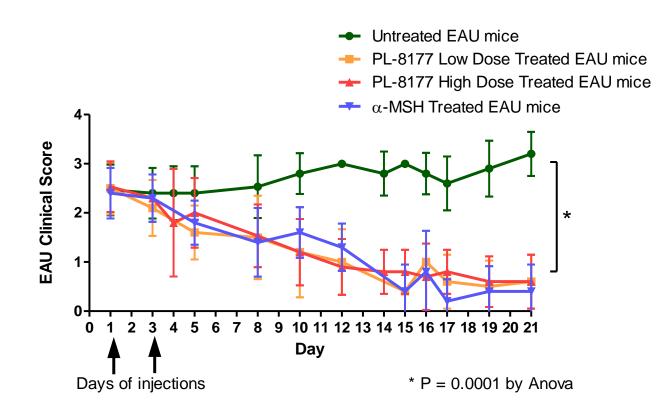
Rat diabetic retinopathy model

#### PL8177 Non-Infectious Uveitis

- Non-Infectious Uveitis (NIU) is a potentially blinding intraocular inflammatory disease that arises without a known infectious trigger and is often associated with immunological responses to unique retinal proteins
- Prevalence of NIU in N. America
  - Adults: ~72,000
  - Pediatric: ~21,000
- NIU causes bilateral legal blindness in 6% of patients and unilateral blindness in 18% of patients
- Only 2 FDA approved treatment options
  - Ozurdex® (dexamethasone intravitreal implant)
  - Humira® (adalimumab)
  - Significant off-label treatments steroids, infliximab, methotrexate, azathioprine, etc.
- There remains a high need for new safer treatments
  - Use of steroids leads to glaucoma and cataracts and has systemic toxicities
  - Humira® increases serious infection risk and has substantial contraindications
- Orphan drug designation for PL8177 for NIU

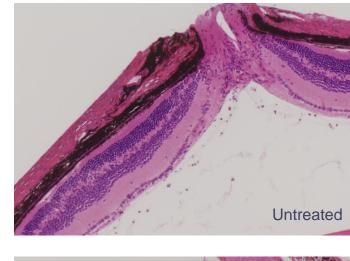


### PL8177 Experimental Autoimmune Uveitis



MC1R agonism has significant effects in reversing uveitis

Conducted in collaboration with Dr. A. Taylor at Boston University School of Medicine



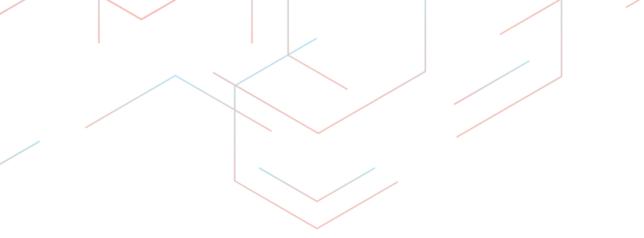




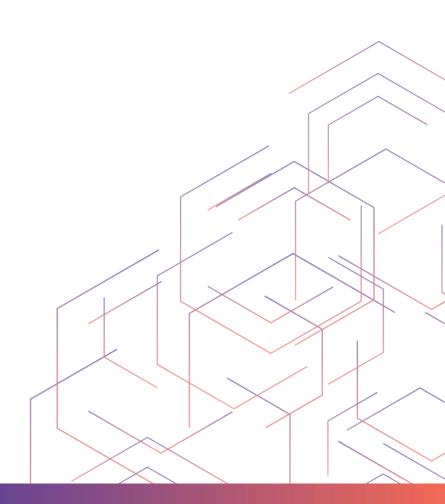
#### **Ocular Development Programs**

- Demonstrated efficacy, safety and tolerability in phase 2 DED study
  - 1<sup>st</sup> evaluation of melanocortin system therapeutic in ocular inflammatory indication
  - Establishes translation of preclinical data into humans
  - Moving forward into registrational studies
- PL9643 phase 2 exploratory study in 2<sup>nd</sup> front of the eye indication
- PL8177 SC non-infectious uveitis Orphan Disease Designation ready for phase 2 proof-of-concept study
- MCR agonist demonstrated efficacy in animal models of retinal disease
  - Suppresses VEGF production and reduces vascular leakage
  - Preserves retinal structure
  - Suppresses inflammation and promotes resolution of inflammatory activity
  - Maintains visual acuity





# PL8177 for Ulcerative Colitis



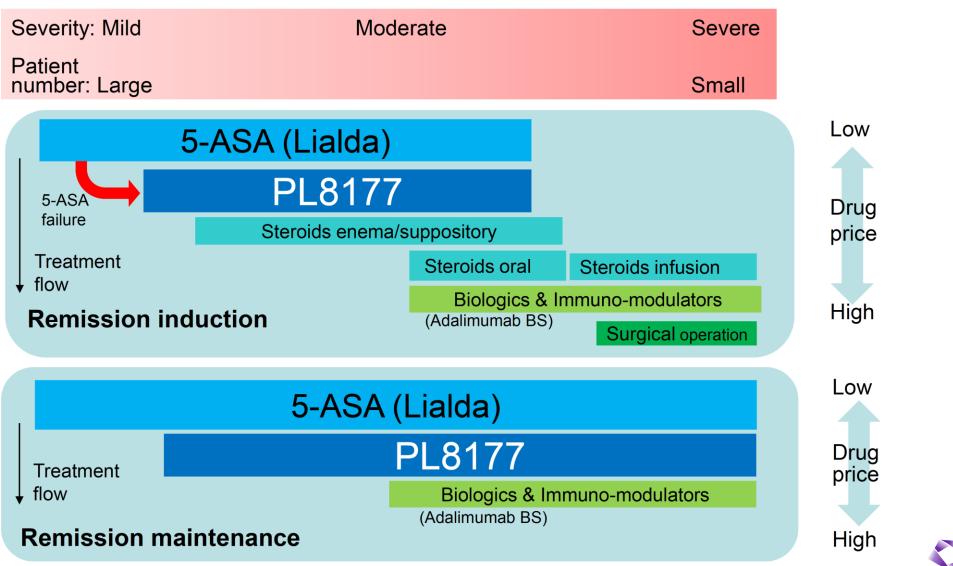


## Why a Melanocortin Peptide for Ulcerative Colitis?

- MC1r is found on epithelial cells of the colon and appear to be accessible from the lumen of the colon
  - Evidence from preclinical animal studies
- PL8177 is a highly potent peptide of 7 aa that is a selective agonist at MCr1
- PL8177 main metabolite is PL8435 which maintains MC1r selective and agonist activity
- Most treatments for UC are systemic and have tolerability and safety limitations
- PL8177 is not systemically absorbed
  - Potential for excellent efficacy without safety concerns
- Compatible with Eudragit polymers that allow for oral delivery to the GI tract for topical delivery



## Opportunity for PL8177 in UC Treatment Landscape



## Study Design

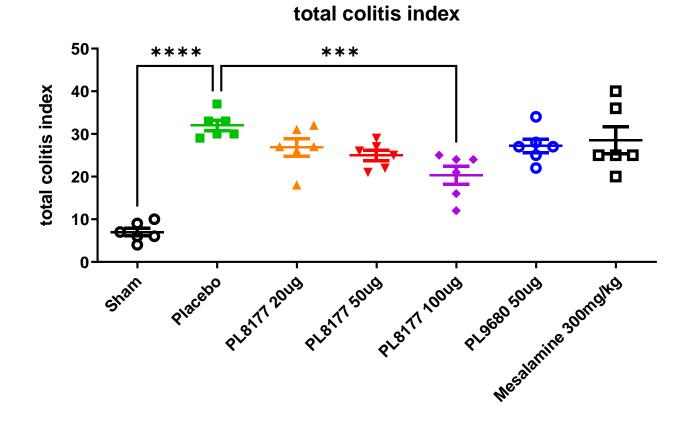
#### Study Outline:



- PL8177 (20ug, 50ug and 100ug) and PL9680 (50ug) are given as a polymer formulation placed into #9 capsules
- Placebo capsules and test article capsules are administered twice daily
- Mesalamine is administered orally once daily



## Histological Findings: Total Colitis Index



- The scoring was based on examining three sections from each colon per animal:
- Sections were taken at the distance of 2.5cm, 5cm and 7.5cm from the anus
- Total colitis index includes observations
  - abnormalities of mucosal architecture,
  - extent of inflammation
  - erosion or ulceration
  - epithelial regeneration
  - percentage involvement by the disease process



## PL8177 Oral Formulation Clinical Study 102 Summary

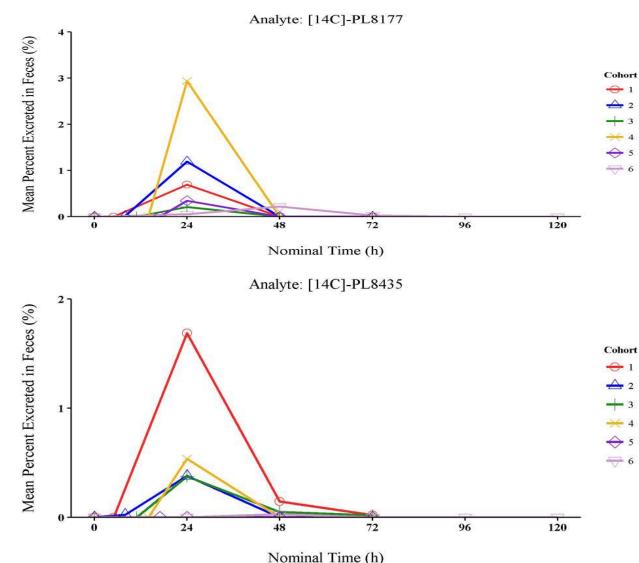
#### Confirmation of local colonic delivery based on presence of PL8177 and metabolite

- This was a phase 0, open-label clinical study conducted at a single center in The Netherlands designed to examine an oral formulation of PL8177
  - A microdose study was chosen in order to assess whether the oral formulation was delivered to the appropriate part of the gastrointestinal tract using a subclinical dose and very small amount of radioactivity
- The primary objectives were
  - To demonstrate release of [<sup>14</sup>C]-PL8177 from the polymer-bound form of [<sup>14</sup>C]-PL8177 in the colon after oral administration through observation of the main metabolite
  - To confirm that the orally administered, polymer-bound form of [<sup>14</sup>C]-PL8177 did not result in systemic exposure to [<sup>14</sup>C]-PL8177 and/or its [<sup>14</sup>C]-PL8435 (main metabolite)
  - To establish the relationship between an oral dose of polymer-bound [<sup>14</sup>C]-PL8177 and the amount of [<sup>14</sup>C]-PL8177 and/or [<sup>14</sup>C]-MAIN METABOLITE in the colon
- The secondary objective was to evaluate the safety and tolerability of the orally administered, polymer-bound form of [<sup>14</sup>C]-PL8177 in healthy male subjects



#### PL8177 Oral Formulation – Human PK (microdose study) Confirmation of GI tract release & no systemic exposure

#### Mean Percent Excretion vs Time in Feces of [14C]-PL8177 and [14C]-PL8435



Cohort 1 = [14C]-PL8177 + laxative 5 h postdose
Cohort 2 = [14C]-PL8177 + laxative 8 h postdose
Cohort 3 = [14C] PL8177 + laxative 11 h postdose

Cohort 4 = [14C]-PL8177 + laxative 14 h postdose

Cohort 5 = [14C]PL8177 + laxative 17 h postdose

Cohort 6 = [14C]-PL8177 without laxative

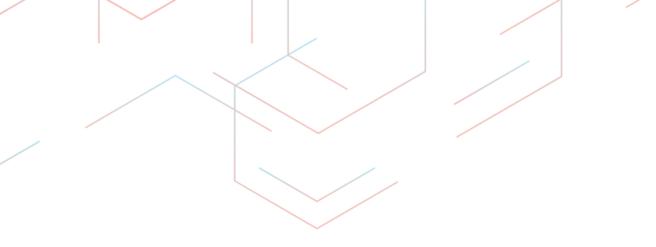
- The metabolite [14C]-PL8435 was quantifiable in fecal samples from 10 subjects, demonstrating that orally administered [14C]-PL8177 was released from its polymer-bound formulation and metabolized to [14C]-PL8435 in the GI tract in those subjects.
- Neither the parent drug [14C]-PL8177 nor the metabolite [14C]-PL8435 were quantifiable in any of the plasma or urine samples, suggesting that oral administration of the polymer-bound formulation of [14C]-PL8177 does not result in systemic exposure of PL8177 and PL8435.



## PL8177 Oral Formulation for UC – Summary Status

- Multiple positive animal model proof of efficacy data in gold standard disease model
- Efficacy as good/better than 5-ASA and glucocorticoids in animal model data
- Phase 1 SAD/MAD study with the systemic formulation (SC) up to 3mg for 7 days, up to 5mg SC for a single dose
- Phase 1 radiolabeled micro-dose study with the oral formulation, confirmed colonic delivery of oral PL8177
- Orally dosed PL8177 remains in the colon there is no systemic exposure
- Phase 2 proof-of-concept trial initiation 4Q2021 / Data 2H2022





# Vyleesi



## Vyleesi Operations/ Performance

- Objective
  - Demonstrate the commercial value and upside of Vyleesi and re-license to a committed partner
- Vyleesi is a valuable asset in the 'right" hands
  - FDA approved product with limited competition
- FSD market
  - Significant awareness needed / greater HCP and patient engagement
- For the quarter ended June 30, 2021
  - Gross product sales increased 28%, net revenue increased 149%, and total prescriptions increased 17%, over the quarter ended December 31, 2020 (Palatin's first full quarter of Vyleesi operations)
  - Gross product sales decreased 32%, net revenue decreased 9%, and total prescriptions decreased 5%, over the prior quarter ended March 31, 2021
  - Refill rates increased over the quarters ended December 31, 2020, and March 31, 2021
  - Market access and reimbursement coverage increased over the quarters ended December 31, 2020, and March 31, 2021
- Learn more about HSDD and Vyleesi at <u>www.vyleesi.com</u>



### FDA Approved Vyleesi®

#### Helping Premenopausal Women with Hypoactive Sexual Desire Disorder (HSDD)



## Hey, you. Meet Vyleesi. ...it's Now Approved

Vyleesi is the first and only as-needed\* treatment for premenopausal women with acquired, generalized hypoactive sexual desire disorder (HSDD).





\*Administer subcutaneously as needed at least 45 minutes before anticipated sexual activity. The duration of its effect after each dose is unknown. Do not administer more than one dose within 24 hours or more than 8 doses per month.



## HSDD is a Significant Market Opportunity

**1/10**<sup>1,2</sup>

Number of premenopausal women who have low desire with associated distress

# 

Affects 5.8 million U.S. premenopausal women<sup>3</sup>

(1 in 10 premenopausal women)<sup>1,2</sup>

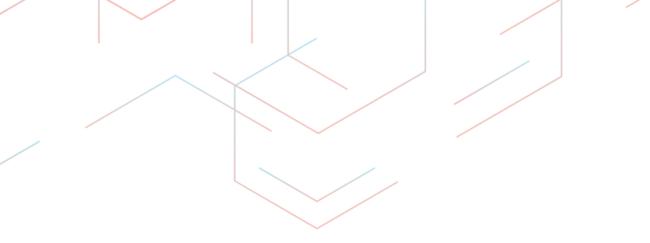
98% (5.7M) of affected premenopausal women not on therapy3

- Focused on relevant digital channels
- Creating an online community for HSDD patients
  - Provide accurate information
  - Tools to support the HSDD patient symptom check, speaking with your doctor and additional resources
- Ensure HCP readiness, provide information and tools to diagnose and treat HSDD patients with Vyleesi

<sup>2</sup> Goldstein I, Kim NN, Clayton AH, et al. Hypoactive sexual desire disorder: International Society for the Study of Women's Sexual Health (ISSWSH) expert consensus panel review. Mayo Clin Proc. 2017;92(1):114-128. <sup>3</sup> Palatin supported research that was performed by Burke, Inc., an ISO 20252–certified company, in compliance with the established standard for market, opinion, and social research.



Financial Highlights as of June 30, 2021	
Cash and Cash Equivalents	\$60.1 million
Accounts Receivable	\$1.6 million
Inventory	\$1.2 million
Inventory Purchase Commitments (over the next 5 years)	\$9.9 million
Summary Capitalization as of August 31, 2021	
	Common Shares and Equivalents
Common Stock	Common Shares and Equivalents 231.3 million shares
Common Stock Preferred	
	231.3 million shares
Preferred	231.3 million shares 0.1 million shares
Preferred Warrants	<ul><li>231.3 million shares</li><li>0.1 million shares</li><li>4.6 million shares</li></ul>



## THANK YOU

