CORPORATE OVERVIEW

January 2022

KIORA PHARMACEUTICALS

Forward Looking Statements

Some of the statements in this press release are “forward-looking” and are made pursuant to the safe harbor provision of the Private Securities Litigation Reform Act of 1995. These “forward-looking” statements include statements relating to, among other things, the development and commercialization efforts and other regulatory or marketing approval efforts pertaining to Kiora’s products, including KIO-101, KIO-201 and KIO-301, as well as the success thereof, with such approvals or success may not be obtained or achieved on a timely basis or at all. These statements involve risks and uncertainties that may cause results to differ materially from the statements set forth in this press release, including, among other things, market and other conditions and certain risk factors described under the heading “Risk Factors” contained in Kiora’s Annual Report on Form 10-K filed with the SEC on March 25, 2021 or described in Kiora’s other public filings. Kiora’s results may also be affected by factors of which Kiora is not currently aware. The forward-looking statements in this press release speak only as of the date of this press release. Kiora expressly disclaims any obligation or undertaking to release publicly any updates or revisions to such statements to reflect any change in its expectations with regard thereto or any changes in the events, conditions, or circumstances on which any such statement is based, except as required by law.

Addressing Unmet Needs in Eye Care

Compelling Value Proposition

New Leadership – Renewed Focus

- Efficient investment to clinical inflection points

Large & Underserved Market Opportunities

- Transformative and reprioritized pipeline

Diversified Portfolio

Revolutionary small molecule with the potential to restore vision in patients with inherited or age-related retinal degeneration

- Unique small molecule MOA restores light perception
- *Entering Ph1b in Q3 2022*

Small molecule DHODH inhibitor to treat immunologic eye disease

- Validated disease modifying target in rheumatology
- *Ph1b trial reported safety, tolerability and significant reduction in clinical sign*

Eye drop to accelerate ocular wound healing and protect the ocular surface

- Next generation cross-linked hyaluronic acid (HA)
- *Ph3b ready*

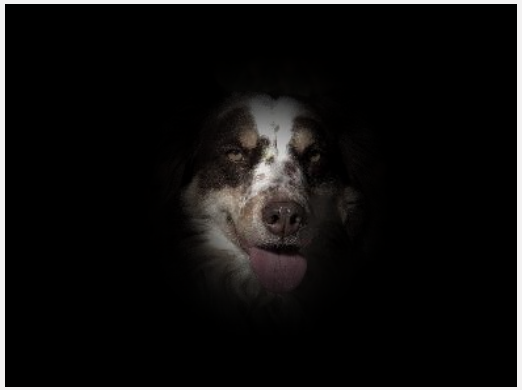
Pipeline

	Therapeutic Category	Product Delivery Route	Indication	Development Stage			
				Pre-clinical	Phase 1	Phase 2	Phase 3
Anterior Segment	Ocular Surface Disease	KIO-101 Eye Drop	Ocular Manifestations of Rheumatoid Arthritis				
	Ocular Wound Healing	KIO-201 Eye Drop	PRK Surgical Recovery				
Posterior Segment	Inherited Retinal Disease	KIO-301 IVT	Mutation Agnostic Retinitis Pigmentosa				
Systemic	Autoimmune	KIO-102 Oral	TBD				

KIO-301

Small Molecule Photoswitch for Retinal Reanimation

Retinitis Pigmentosa (RP) Disease Overview



Prevalence

- 1:3,000-1:5,000 (Orphan Disease)

Etiology

- 50+ genetically distinct subtypes from 150+ mutations
- Inherited disease

Clinical Presentation

- Night blindness, reduced visual field range and eventual loss of central vision
- Visual acuity declines

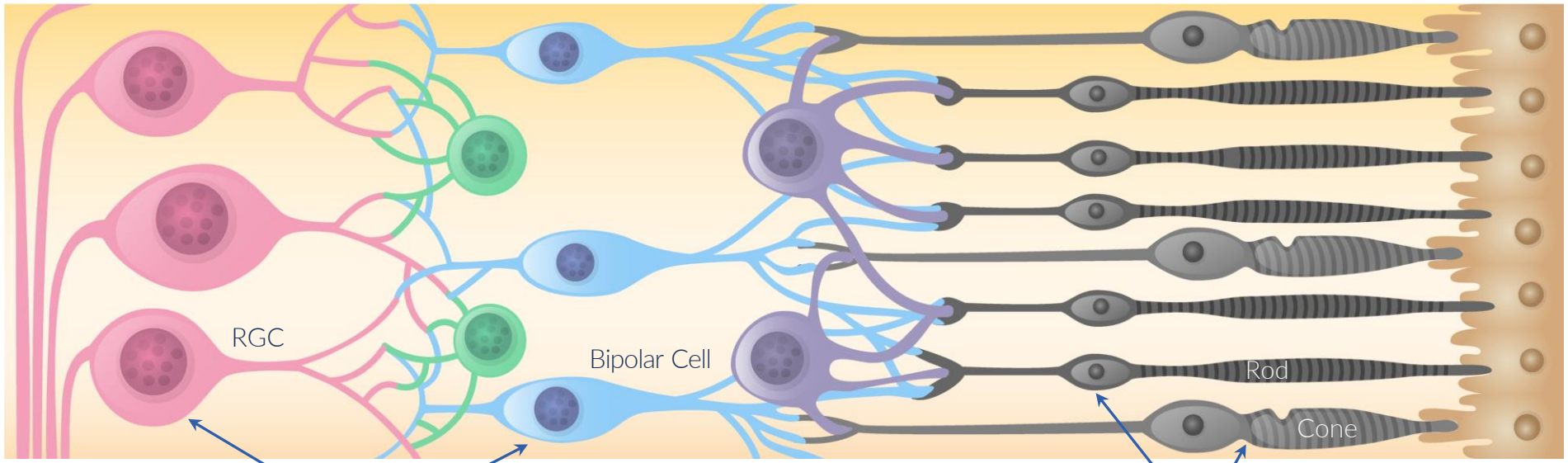
Diagnosis

- Retinal exam (black bone-spicule pigmentation)
- ERG provides definitive diagnosis
- Genetic testing

KIO-301 is mutation agnostic

American Academy of Ophthalmology

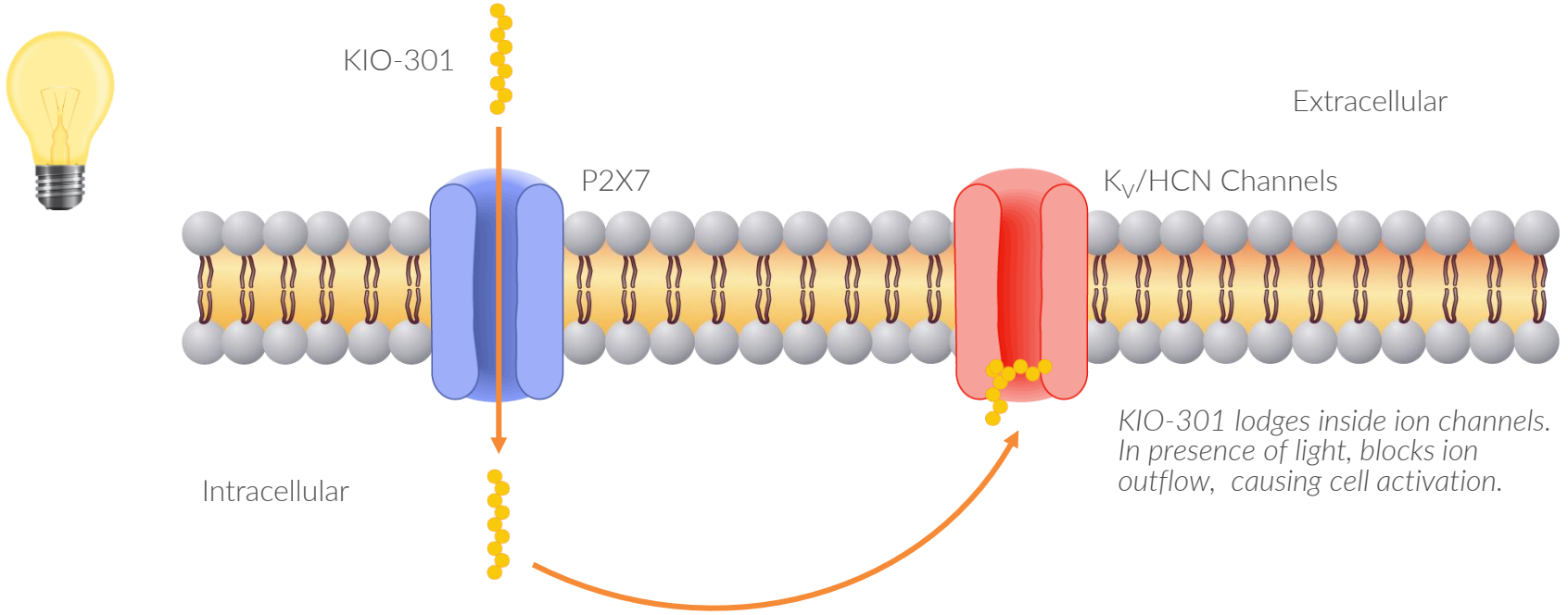
RP – How Retinal Degeneration Occurs

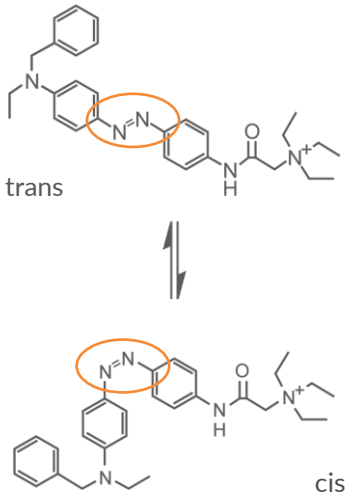


- Normal human retina has about 120 million rods (black & white, night vision, movement) and 6 million cones (color)
- Photoreceptors die (rods first, then cones), unable to activate Bipolar cells and Retinal Ganglion Cells (RGCs)
- Bipolar cells and RGCs remain intact and retain ability to send signals to the brain

KIO-301 Turns RGCs “ON” in the Presence of Light

1. In RP, photoreceptors are no longer viable and therefore their companion “signal” cells (RGCs) are not capable of being activated or set to “OFF”
2. KIO-301 preferentially enters these “OFF” RGCs and turns them “ON” in the presence of light*

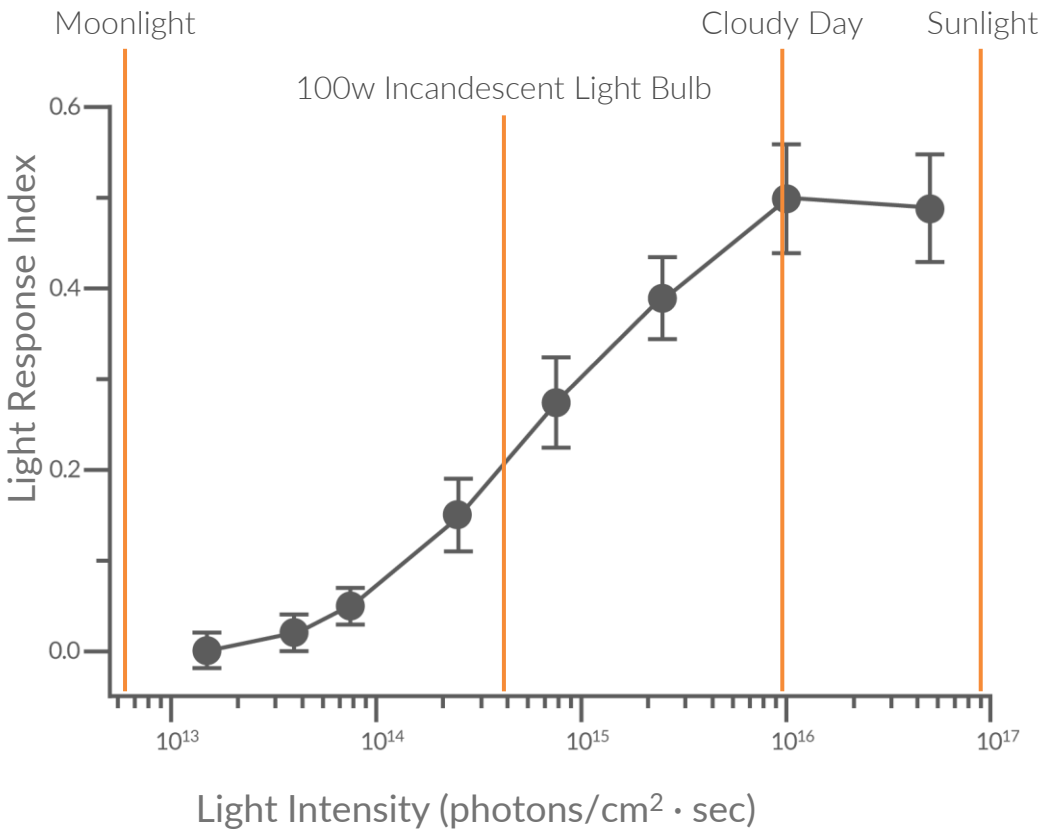


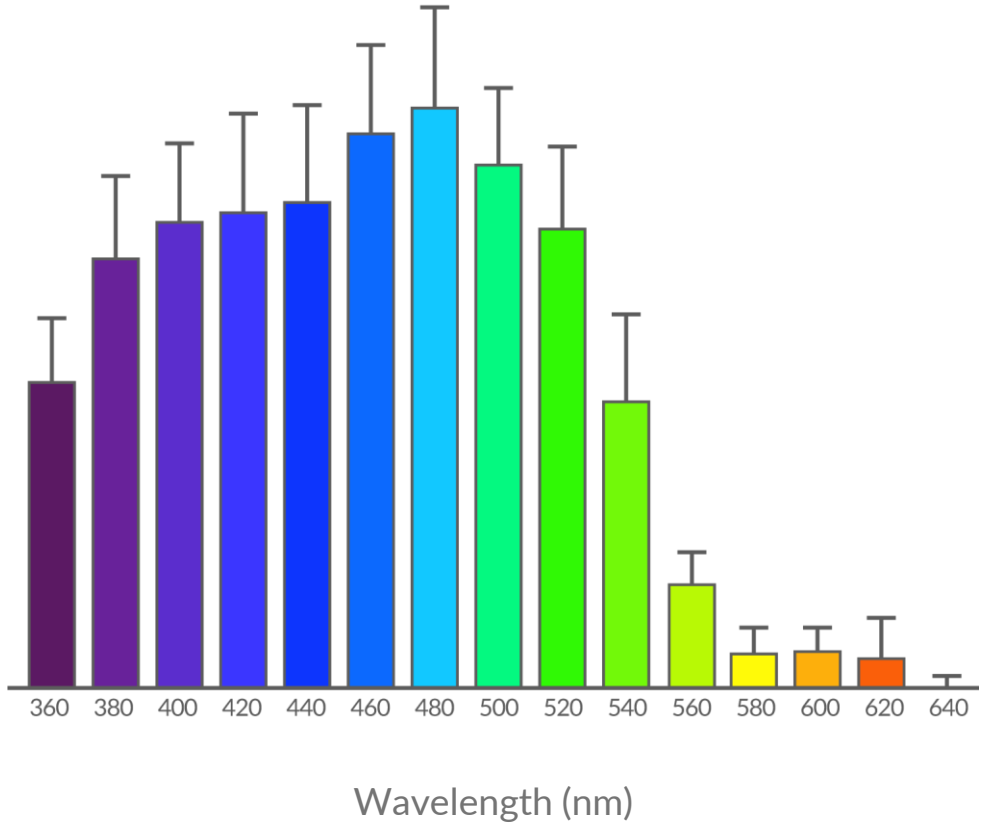


* Visual light causes shape change of KIO-301 (trans ⟶ cis), blocking the movement of positively charged ions out of the cell through the K_V/HCN channels. This build up of charged ions in the cell triggers activation (phototransduction signaling) to the brain.

Neuron. 92, 100-113 (2016)

KIO-301: Light Intensity and Wavelength

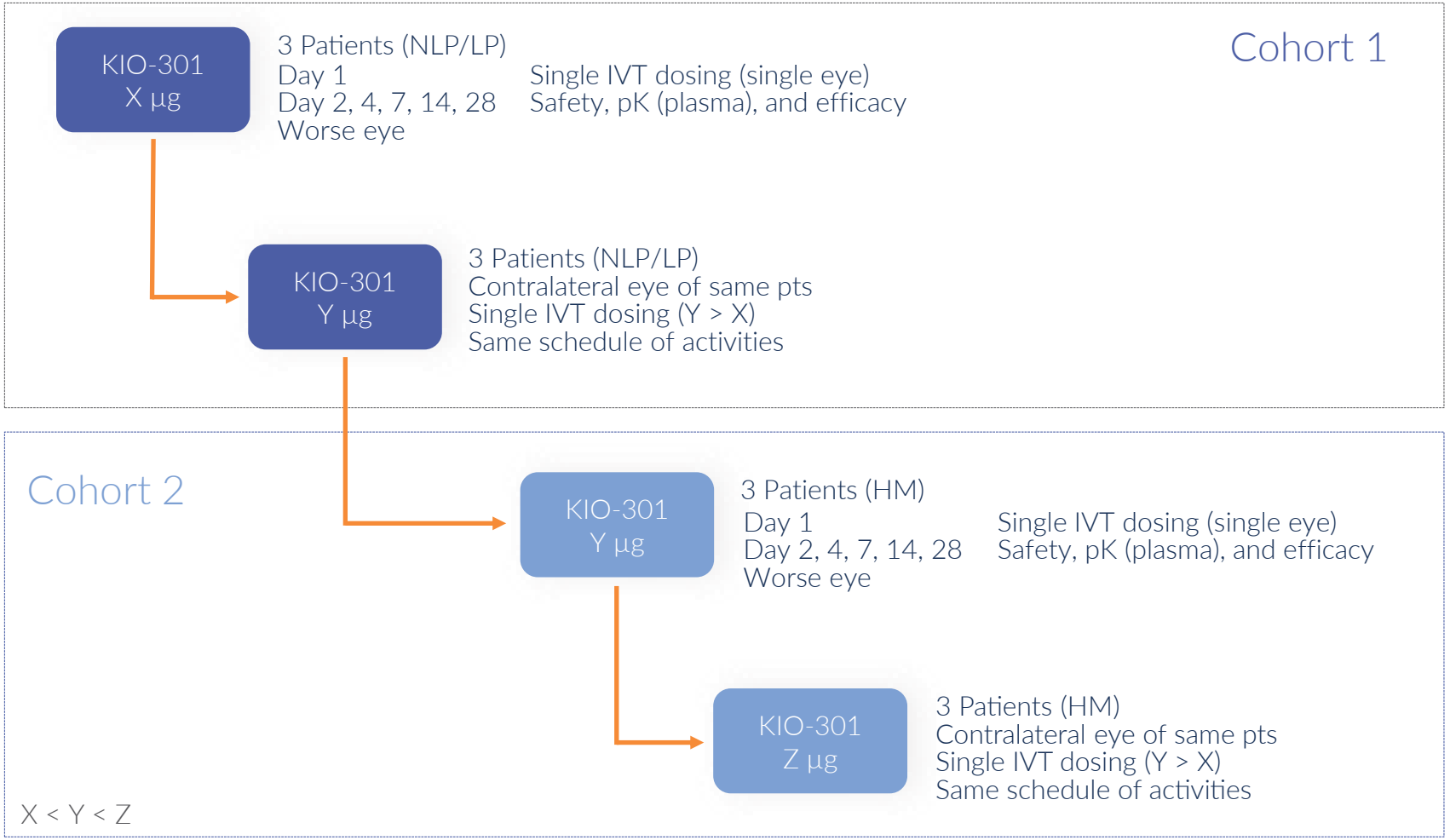




Sci. Rep. 7, 45487 (2017), Banghart, Trauner et al (2008)

KIO-301: Phase 1b Study Design

Open Label, Single Ascending Dose Trial – Royal Adelaide Hospital, Australia



Investigator led safety assessment along and between cohorts

KIO-101

Potential 1st in Class Treatment for Ocular Manifestations of Rheumatoid Arthritis (RA)

Ocular Involvement of RA Overview

"The immune attack on the surface of the eye is a mirror image of what is destroying the joint synovium"
- Sandeep Jain, MD,
Univ of Illinois, College of Med

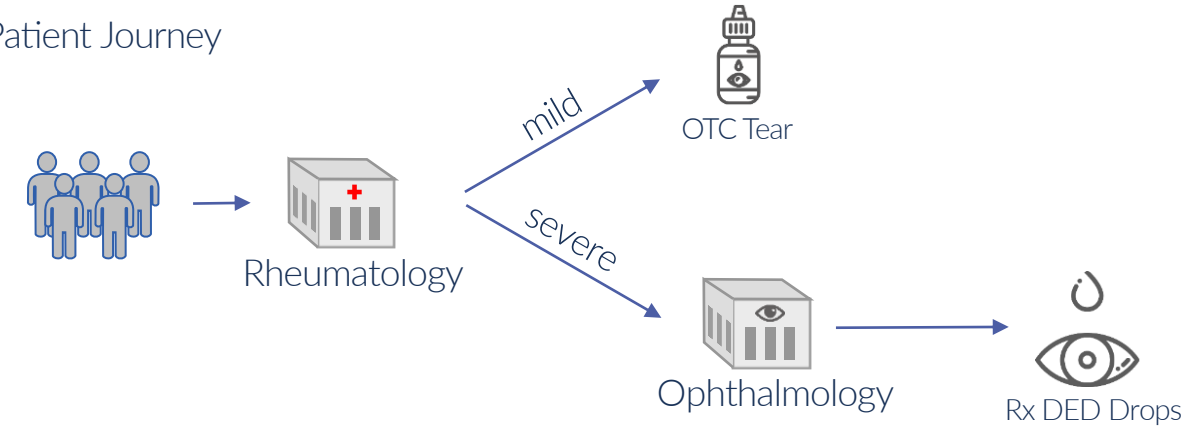
Rheumatoid Arthritis (RA) is a **chronic, systemic autoimmune disease** that primarily effects joint linings, causing swelling, bone erosion and deformity

- No cure exists but symptoms can be managed with disease modifying medications
  - DHODH inhibitors, IL-6, TNF-α antagonists and others

Large unmet need

- 3.3 million people in United States have RA
- >30% of these patients have ocular manifestations (~1.1m)
  - Ocular signs & symptoms are the most common, non-articular manifestations of RA

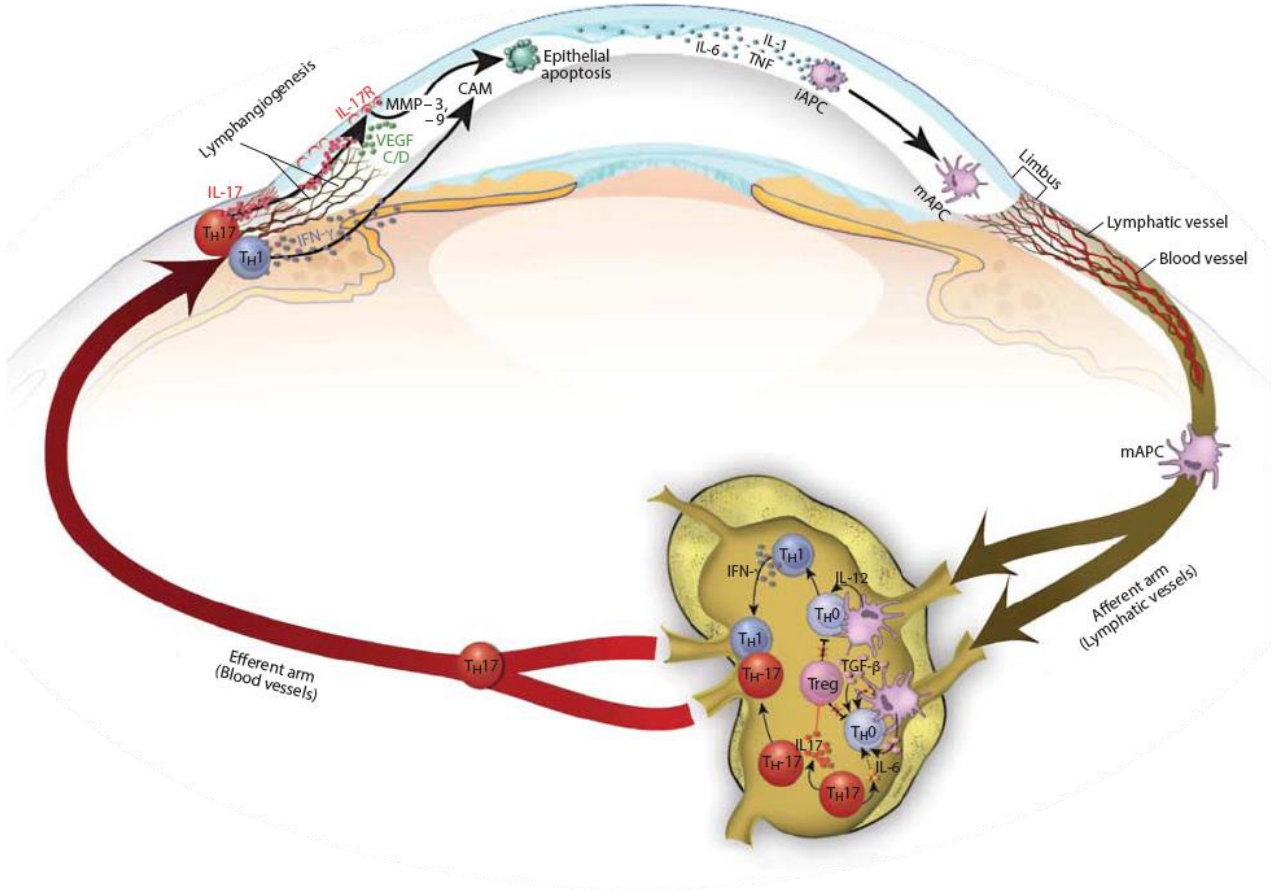
Patient Journey



Rheumatol Int. 2017 Sep;37(9):1551-1557. Eyenet Magazine. 2016 Nov:37-9. IVOS. 2015 Jun;56(7):4437.

RA Ocular Signs & Symptoms are Mediated by T Cells

KIO-101 acts upstream to inhibit proliferation of T helper cells (Th1 and Th17) in lymph node and on-site to suppress pro-inflammatory cytokine release



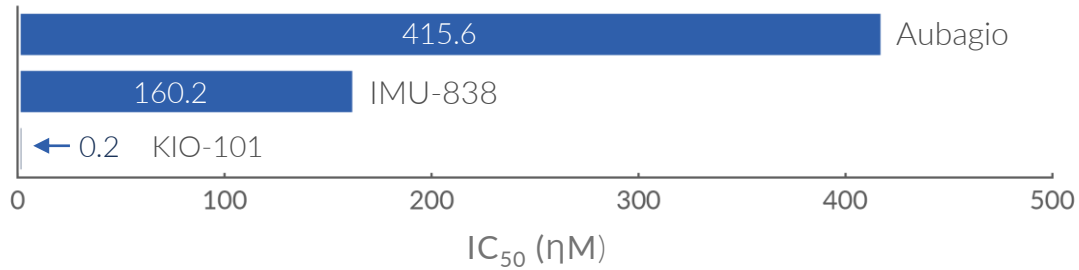
Arch Ophthalmol. 2012 Jan;130(1):90-100

DHODH Inhibitors

Validated Drug Class for Autoimmune Diseases

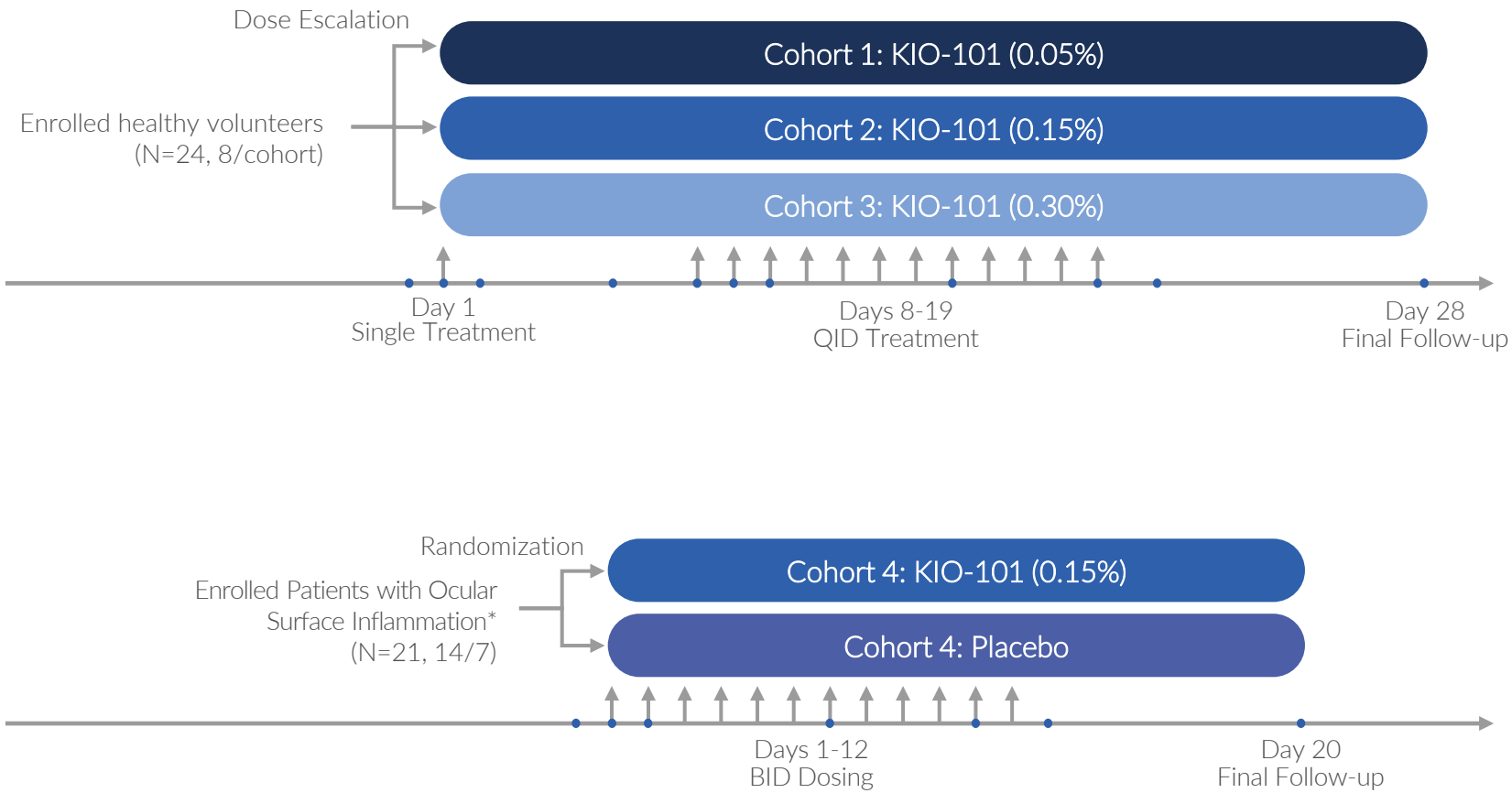
Company	Drug	Status*	Market / Revenue
Sanofi	Arava (leflunomide) Aubagio (teriflunomide)	On market for RA On market for MS	~$2.5B annual revenue Low selectivity and potency results in off-target side effects ▪ Safety concerns of severe liver injury and other adverse events ▪ Black box added regarding the risk of severe liver injury
PTC Therapeutics	PTC299	Ph1b AML Ph2/3 COVID-19	
Immunic	IMU-838	Ph2/3 UC, MS, CD	
ASLAN	ASLAN003	Ph2 autoimmune	
Clear Creek Bio	Brequinar	Ph2 AML Ph2 COVID-19	
Kiora Pharmaceuticals	KIO-101	Ph2 Ocular RA Preclin autoimmune	

*As of April 2021



KIO-101 overcomes safety concerns with greater specificity and best in class potency

KIO-101: Exploratory Phase 1b Ocular Surface Inflammation Trial



Dosing Days
Follow-Up Days

Key Inclusion Criteria

- Ocular surface inflammation defined by OSDI of at least 22
- Conjunctival hyperemia ≤ Grade 2 on the Efron Scale

1° & 2° Outcomes

Safety ▪ pK ▪ Exploratory Efficacy Including OSDI, Conjunctival Hyperemia, Corneal Staining, and Tear Break-Up Time

Safety Analysis* – Summary Statistics Table (p values)

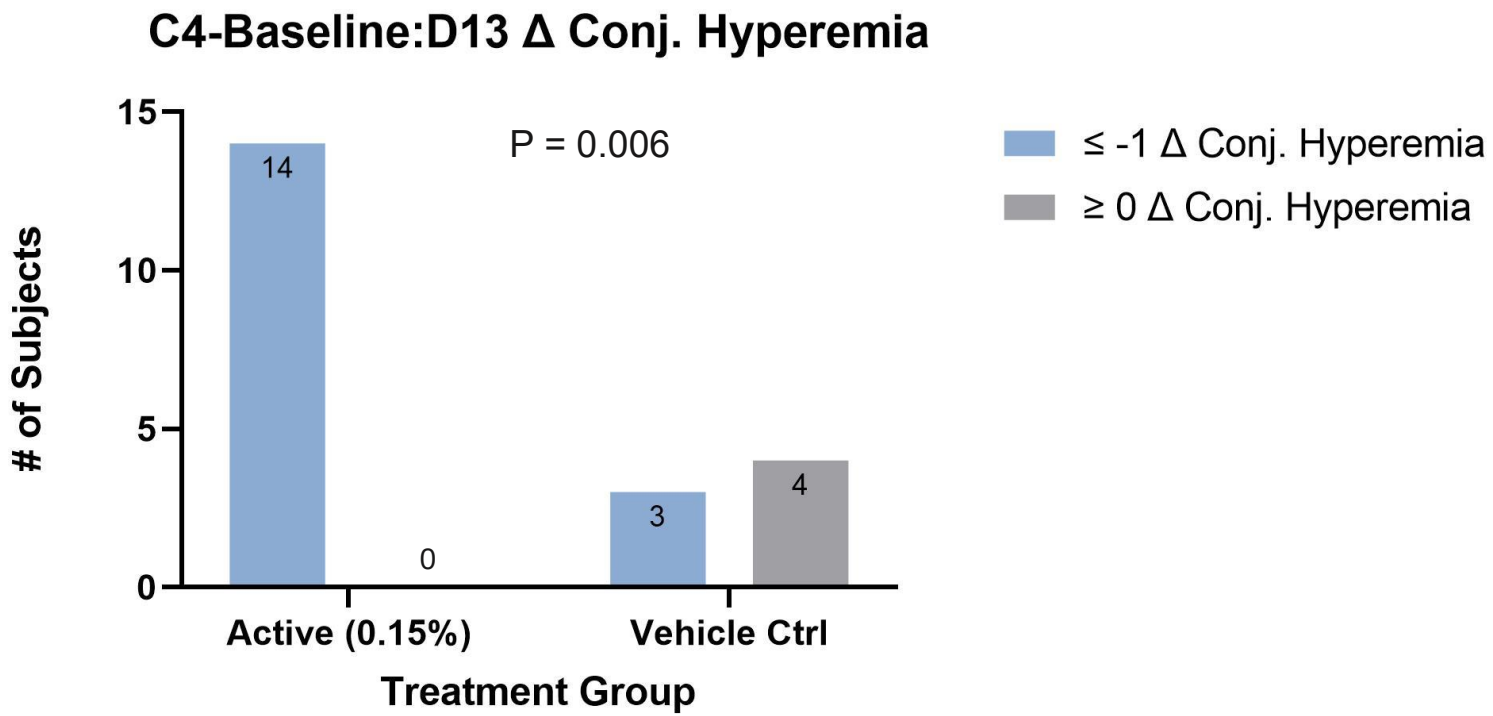
	All Actives (healthy only) vs Vehicle	Cohort 4 Only: Active vs Vehicle
AEs	0.6653	0.3615
SAEs**	NC	NC
Ocular AEs	0.2500	0.3371
Ocular SAEs***	NC	NC
Ocular Related AEs	0.2500	0.6244

Key Takeaways

Topical KIO-101 at low and mid doses tested is safe & well tolerated in both healthy subjects and those with ocular inflammation. High dose inconclusive.

* Safety Population; ** Zero SAEs reported; *** Zero Ocular SAEs reported

Conjunctival Hyperemia (sign)

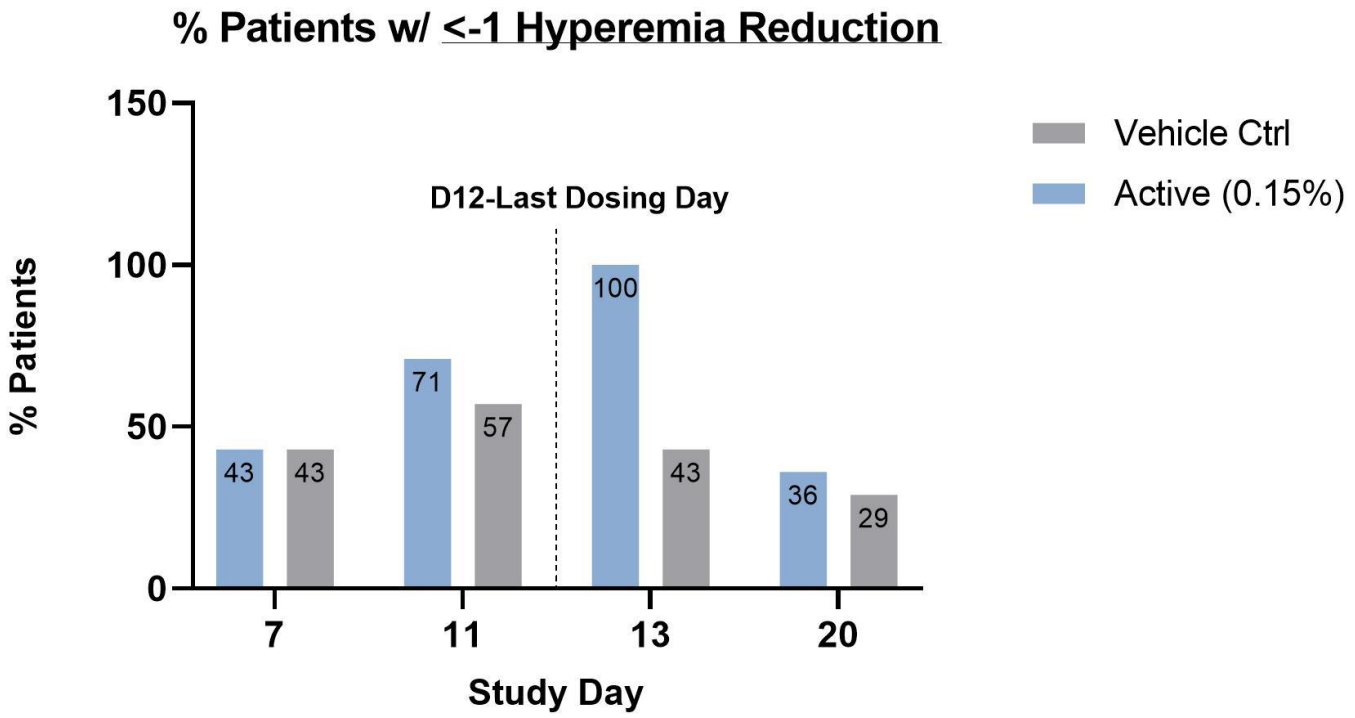


Key Finding

- Hyperemia was a key inclusion criteria
- 100% of subjects on active experienced improvement @ D13
- Hyperemia is an acceptable endpoint as a 'sign' for US FDA

p value calculated using Fisher's Exact Test

Change In Hyperemia By Day

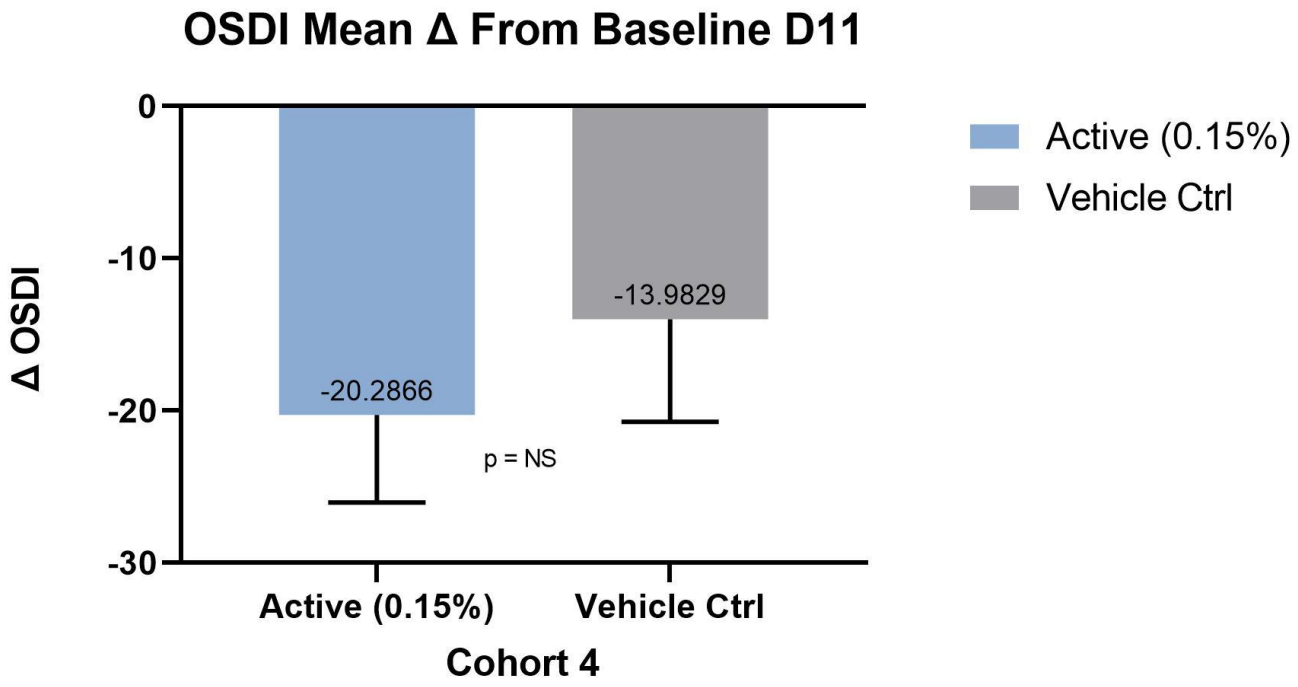


Drug Effect

Encouraging to see drug effect increase & decrease. Day 20 is 8 days following last dose.

Top-Line Data: OSDI

- Inclusion criteria was OSDI > 22
- OSDI measured @ screen & D11
- Active demonstrated small trend toward significance



KIO-201

Accelerating Ocular Surface Wound Healing

Ocular Surface Diseases

Wounds: Surgery

9%

~5 million US patients

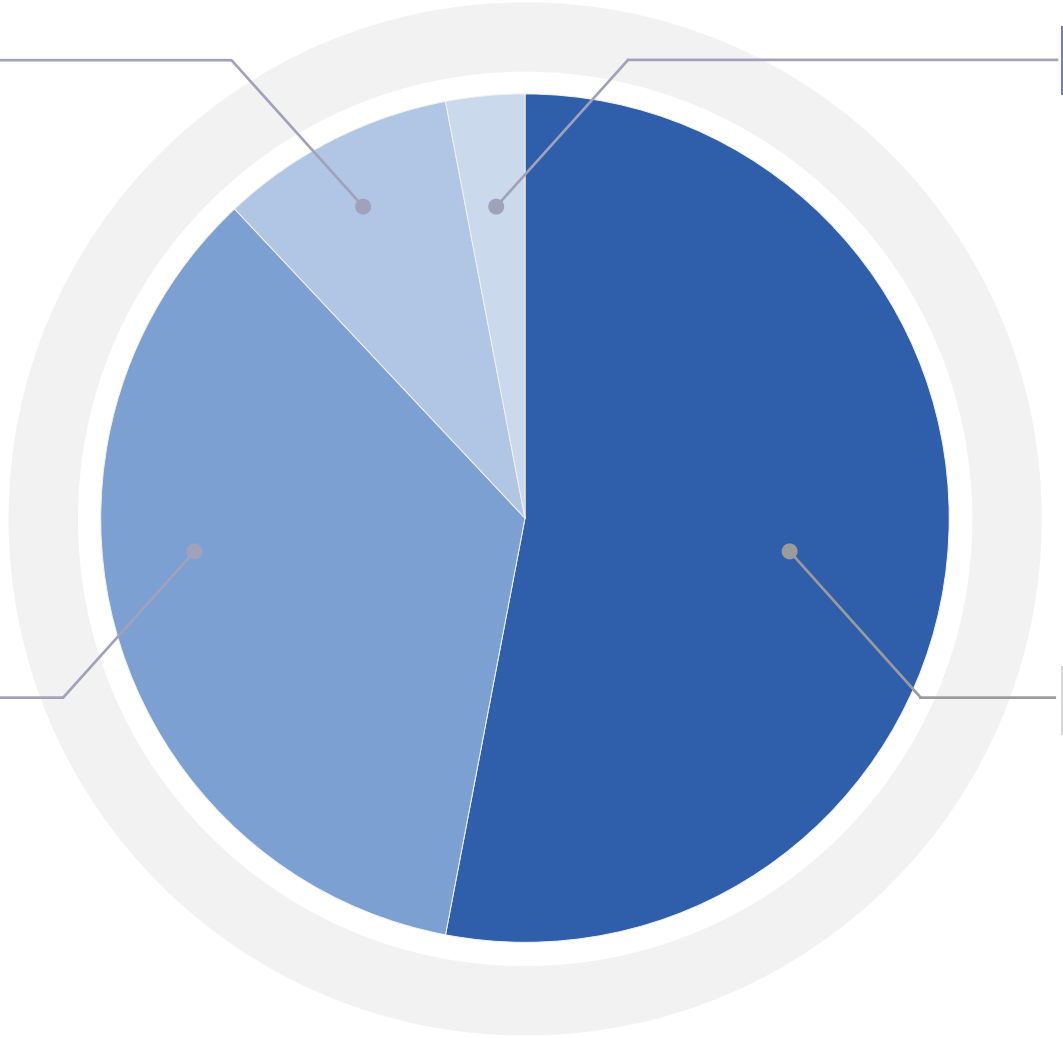
Refractive surgeries (e.g., PRK)
Cataracts
Collagen cross-linking

Wounds: Trauma

3%

~2 million US patients

Injuries/abrasions
Chemical burns
Difficult to heal PED/ulcers



Epitheliopathies: Dry Eye

35%

~18 million US patients

Episodic/mild
Moderate
Severe

Epitheliopathies: Non-Dry Eye

53%

~28 million US patients

Contact lens wear
Ocular irritants
Glaucoma medications

American Academy of Ophthalmology

Refractive Surgery Overview

PRK

- PRK is a surgical correction of refractive errors for patients who are not suitable candidates for LASIK due to:
  - Inadequate corneal thickness
  - Larger pupil size
  - Dry eye
  - Anterior basement membrane disease
- PRK involves controlled mechanical removal of corneal epithelium with subsequent lasering of stroma

The Unmet Need

- While PRK yields superior visual results, complications include:
  - Post-operative pain
  - Risk of infection
  - Corneal haze
  - Decreased contrast sensitivity
  - Slower visual recovery
- Standard-of-care is a Bandage Contact Lens (BCL) which can result in subsequent erosion of epithelium

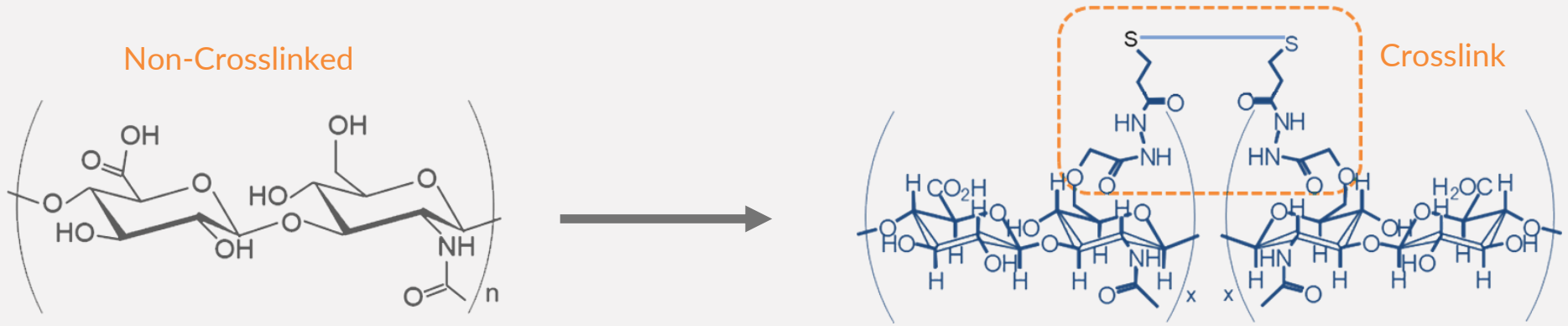
The Opportunity

- Enabling the epithelium to heal faster may mitigate peri-operative complications and improve long-term visual outcomes
- The PRK population is ideal:
  - Large population (~850,000 LASIK/PRK surgeries per year in the US)
  - Large wound (9mm), same size for all patients and known time zero
  - Time to healing well-established

American Academy of Ophthalmology, Ocular Surgery News: April 10, 2019

KIO-201

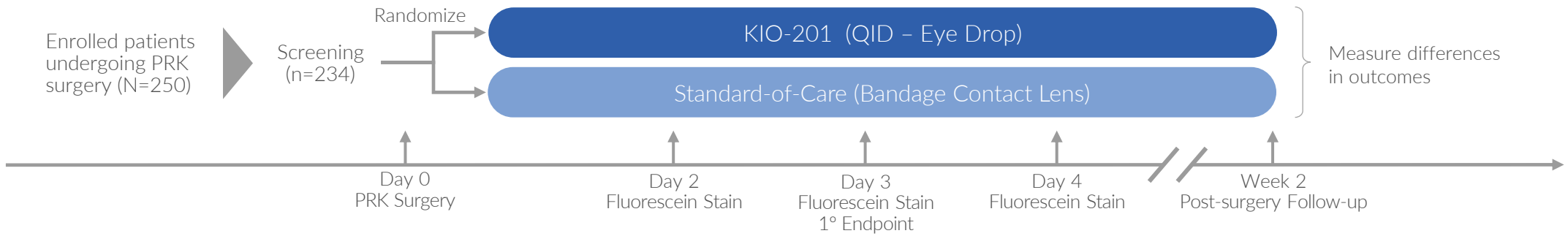
- KIO-201 is based on a modified form of the natural polymer hyaluronic acid (HA)
- HA is a material with a high viscosity that promotes wound healing by enabling enhanced cell migration
- 5 clinical trials completed (3 PRK surgical recovery and 2 dry eye)
  - > Approximately 400 eyes have been treated with KIO-201
  - > Strong safety and efficacy profile



Crosslinking Creates Unique Attributes Ideal for Ocular Surface

- Improved product stability
- Longer retention on the ocular surface over non-crosslinked HA (2 hours vs minutes)
- Able to achieve concentrations up to 7.5x current products
- Decreased viscosity during blinking = no blurred vision

PRK Study Design



Study Design

- Two-arm, randomized, positive-controlled, masked via reading center

Outcome Measures

- Primary endpoint: Complete corneal re-epithelialization on Day 3 (% of eyes w/ fully closed wound and remain closed)
- Key secondary endpoint: Mean wound size (days 2, 3, 4)

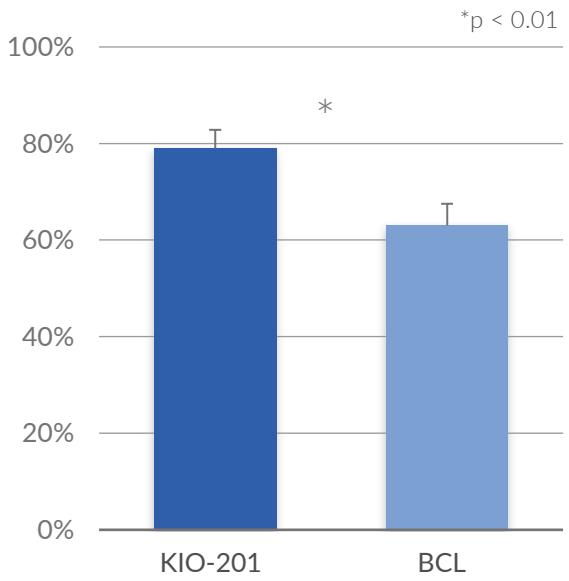
Enrollment

- 250 patients enrolled (9 US sites)
- 234 qualified patients randomized to KIO-201 or BCL group post-surgery (16 screen failures)

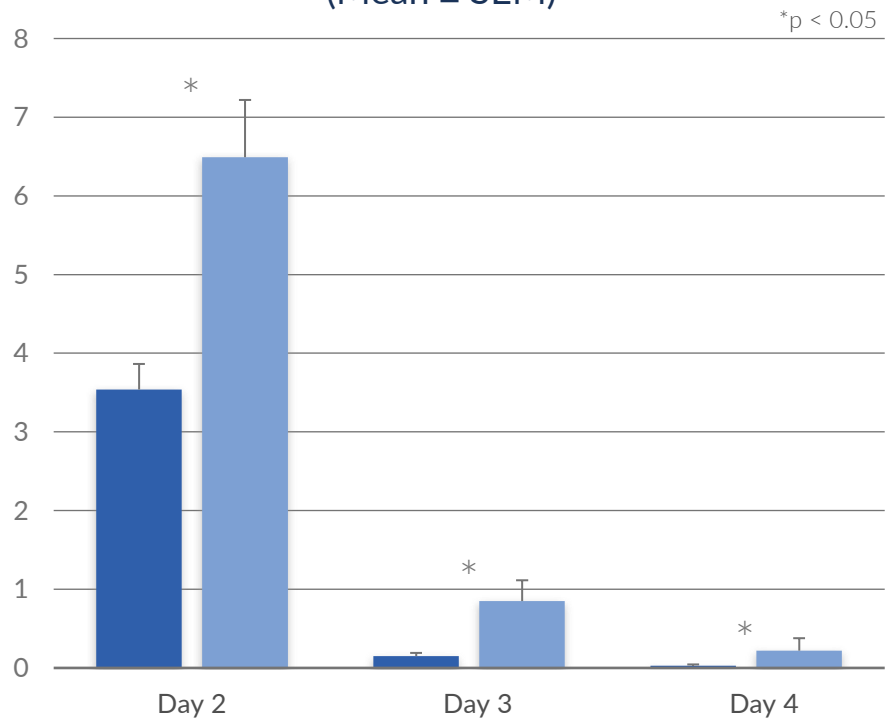
ClinicalTrials.gov Identifier: NCT03938883

KIO-201 Demonstrated Superiority versus BCL

Percent of Patients with Complete Re-Epithelialization Day 3 (Mean ± SEM)



Mean Wound Size (mm^2) (Mean ± SEM)



Recurrent Erosion

- Only 1 (0.9%) study eye in the KIO-201 group had recurrent erosion
- 4 (3.5%) study eyes in the Bandage Contact Lens (BCL) group had recurrent erosion

Corporate Overview

Executive Team

Brian M Strem, PhD
President & CEO

Sarah Romano, CPA
Chief Financial Officer

Eric J Daniels, MD, MBA
Chief Development Officer

Brenda Mann, PhD
VP – Research

Stefan Sperl, PhD
EVP – CMC & Operations

Angela Dentiste, MBA
VP – Clinical Operations

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Paul Chaney
Lead Independent Director

Stephen From
Executive Chairman

Ken Gayron

David Hollander, MD, MBA

Aron Shapiro

Praveen Tyle

Brian M Strem, PhD
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Scientific Advisory Board

Allen Ho, MD, PhD

Wills Eye Hospital

Christine Kay, MD, PhD

Vitreo Retinal Associates

Russel Van Gelder, MD, PhD

UW Medicine
UW School of Medicine

Charlie Wykoff, MD

Retina Consultants of Texas™

Daniel Durrie, MD

KU Medical Center
The University of Kansas

Paul Karpecki, OD, FAAO

Kentucky Eye Institute

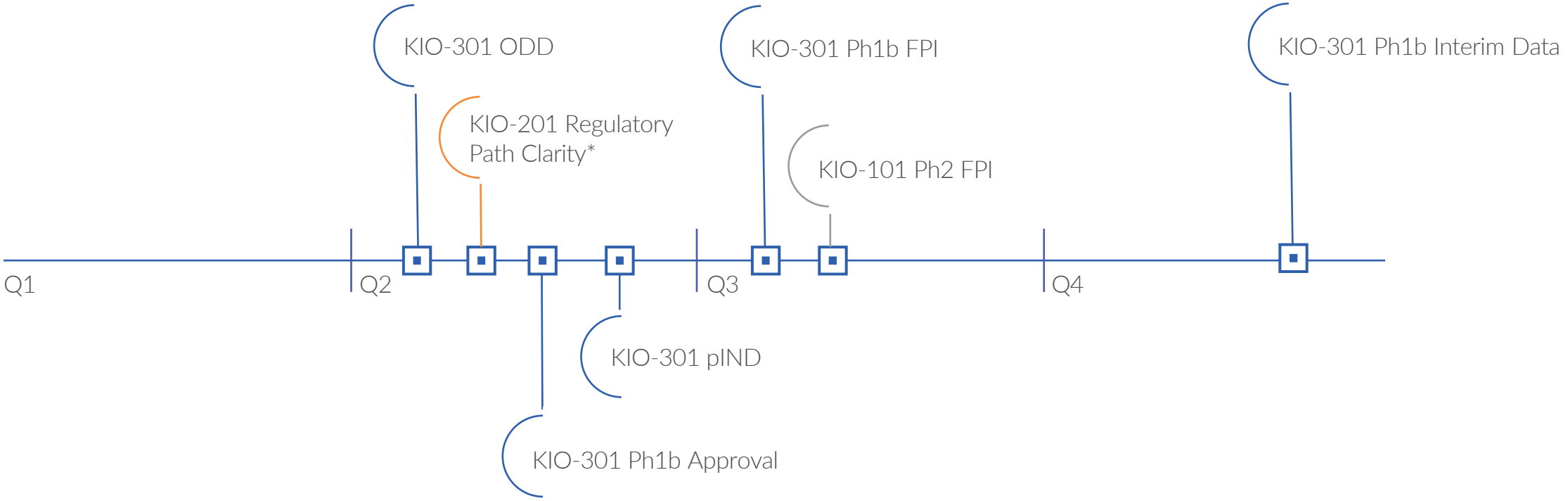
Francis Mah, MD

Scripps

Victor Perez, MD

Duke University School of Medicine

Key Expected 2022 Milestones



* - After regulatory clarity from FDA, will seek commercial partnership
FPI – First Patient In, ODD – Orphan Drug Designation

Contact:
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