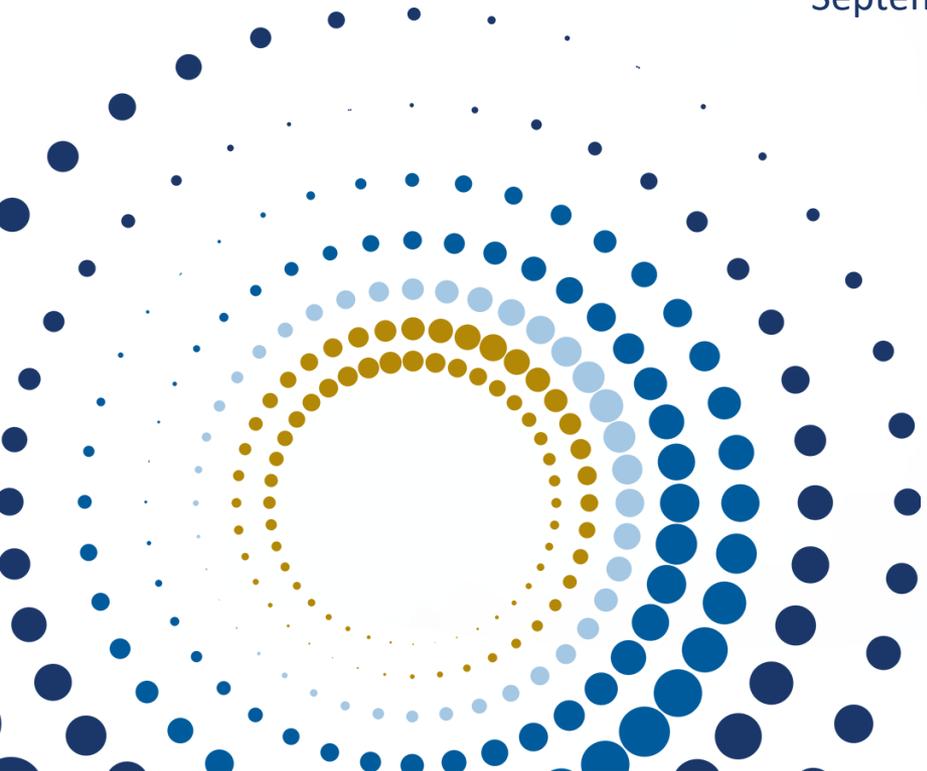


(NASDAQ: OCU)

TRANSFORMING DRUG DELIVERY

LEVERAGING A NOVEL TECHNOLOGY PLATFORM

ANTONY MATTESSICH, CHIEF EXECUTIVE OFFICER
September 2021

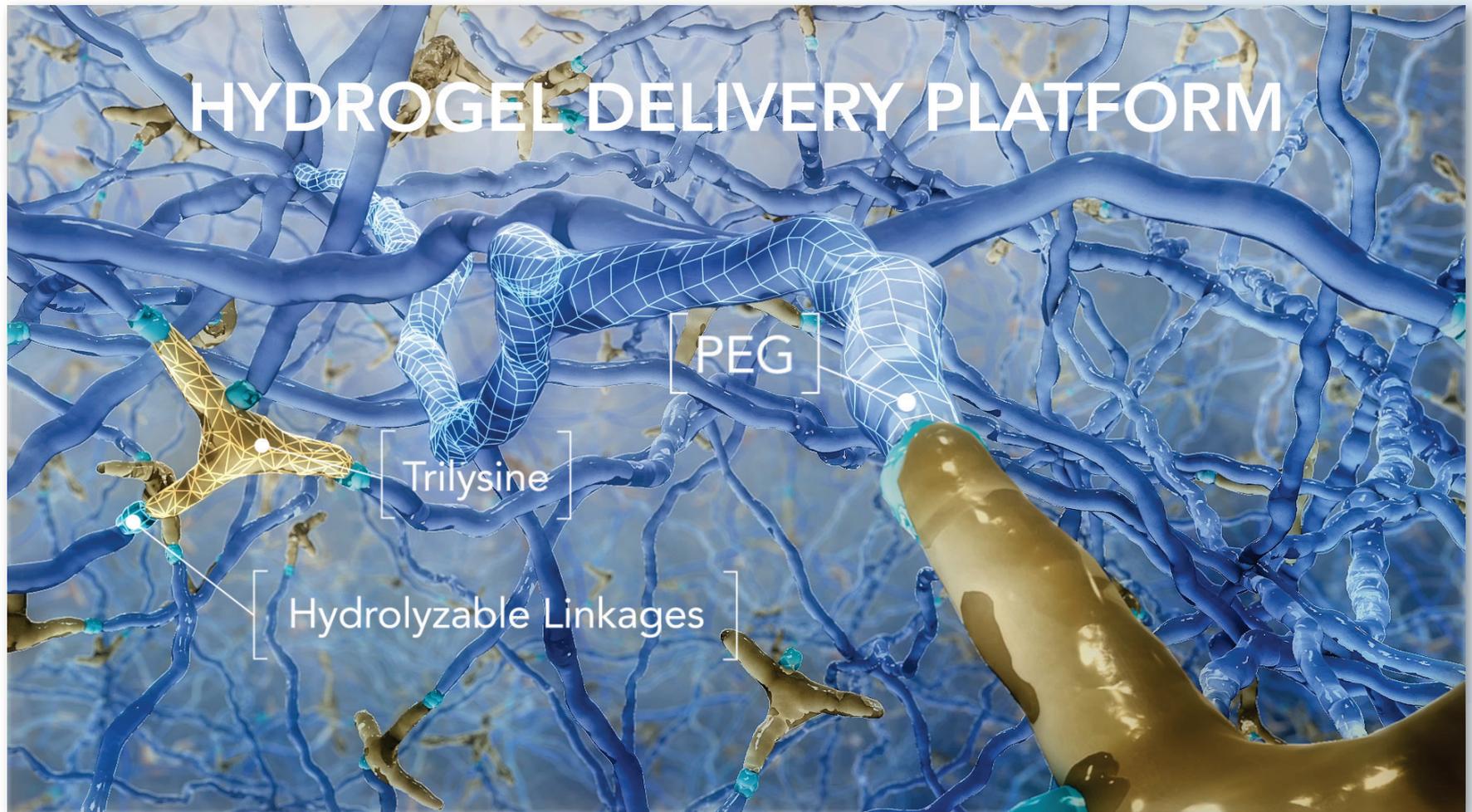


Ocular
Therapeutix™

FORWARD LOOKING STATEMENTS

Any statements in this presentation about future expectations, plans, and prospects for the Company, including the commercialization of DEXTENZA®, ReSure® Sealant, or any of the Company's product candidates; the commercial launch of, and effectiveness of reimbursement codes for, DEXTENZA; the conduct of post-approval studies of and compliance with related labeling requirements for DEXTENZA and ReSure Sealant; the development and regulatory status of the Company's product candidates, such as the Company's development of and prospects for approvability of DEXTENZA for additional indications including the PDUFA target action date scheduled for October 18, 2021 for allergic conjunctivitis, OTX-CSI for the chronic treatment of dry eye disease, OTX-DED for the short-term treatment of the signs and symptoms of dry eye disease, OTX-TIC for the treatment of primary open-angle glaucoma or ocular hypertension, and OTX-TKI for the treatment of retinal diseases including wet AMD; the ongoing development of the Company's extended-delivery hydrogel depot technology; the size of potential markets for our product candidates; the potential utility of any of the Company's product candidates; the potential benefits and future operations of Company collaborations, including any potential future costs or payments thereunder; projected net product revenue, in-market sales and other financial and operational metrics of DEXTENZA and ReSure Sealant; potential market sizes for indications targeted by the Company's product candidates, if approved; the expected impact of the COVID-19 pandemic on the Company and its operations; the sufficiency of the Company's cash resources and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "goal," "may," "might," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors. Such forward-looking statements involve substantial risks and uncertainties that could cause the Company's preclinical and clinical development programs, future results, performance or achievements to differ significantly from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the timing and costs involved in commercializing DEXTENZA, ReSure Sealant or any product candidate that receives regulatory approval, including the conduct of post-approval studies, the ability to retain regulatory approval of DEXTENZA, ReSure Sealant or any product candidate that receives regulatory approval, the ability to maintain and the sufficiency of product, procedure and any other reimbursement codes for DEXTENZA, the initiation, timing, conduct and outcomes of clinical trials, availability of data from clinical trials and expectations for regulatory submissions and approvals, the Company's ability to enter into and perform its obligations under collaborations and the performance of its collaborators under such collaborations, the Company's scientific approach and general development progress, the availability or commercial potential of the Company's product candidates, the Company's ability to generate its projected net product revenue and in-market sales on the timeline expected, if at all, the sufficiency of cash resources, the Company's existing indebtedness, the ability of the Company's creditors to accelerate the maturity of such indebtedness upon the occurrence of certain events of default, the severity and duration of the COVID-19 pandemic including its effect on the Company's and relevant regulatory authorities' operations, any additional financing needs and other factors discussed in the "Risk Factors" section contained in the Company's quarterly and annual reports on file with the Securities and Exchange Commission. In addition, the forward-looking statements included in this presentation represent the Company's views as of the date of this presentation. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so, whether as a result of new information, future events or otherwise, except as required by law. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date of this presentation.

TRANSFORMING DRUG DELIVERY WITH A NOVEL TECHNOLOGY PLATFORM



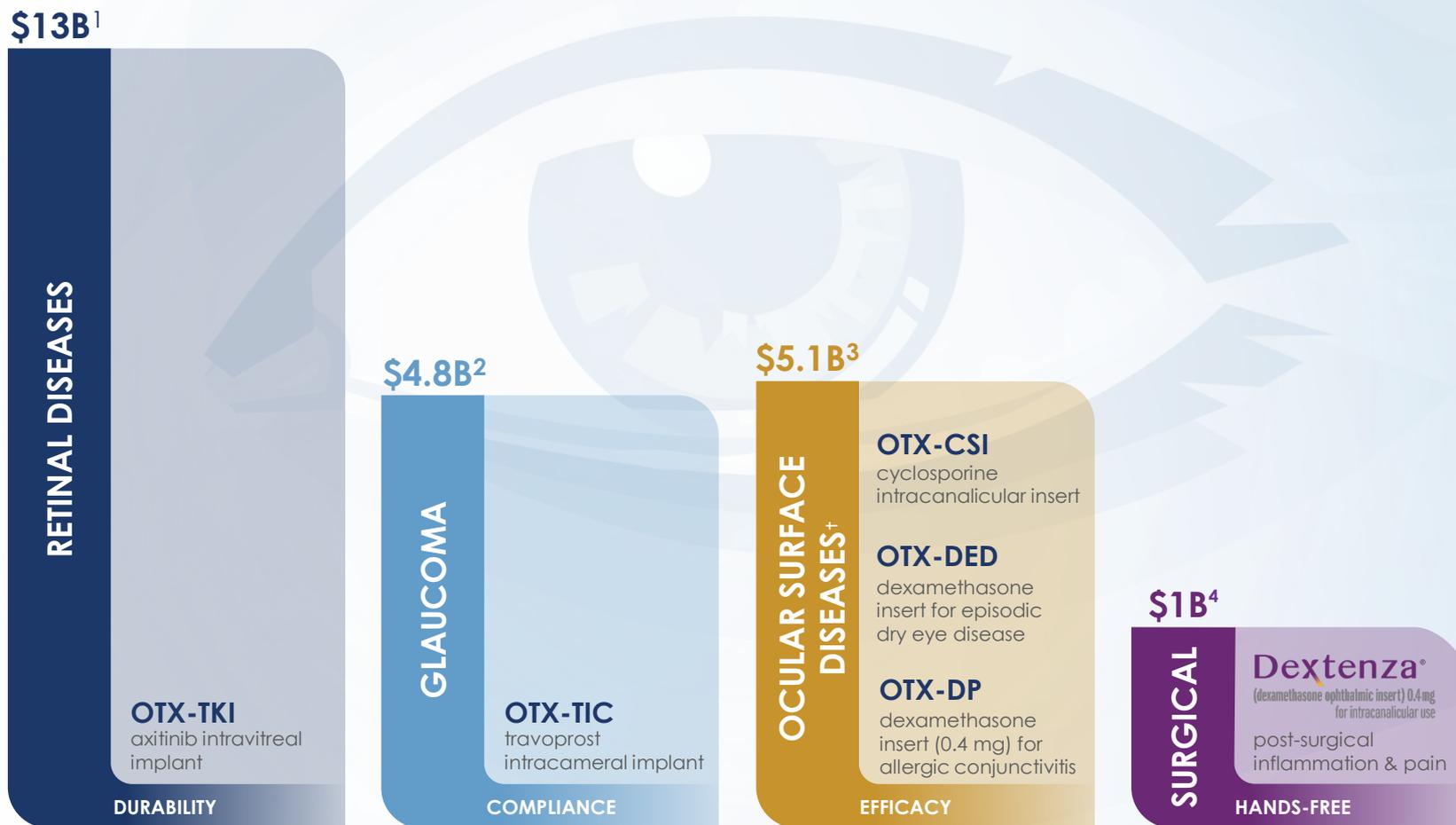
PIPELINE AT A GLANCE

PRODUCT/PROGRAM	THERAPEUTIC FOCUS	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	REGULATORY APPROVAL
RETINA						
OTX-TKI (axitinib intravitreal implant)	Wet AMD, DME and RVO*	▶				
GLAUCOMA						
OTX-TIC (travoprost intracameral implant)	Glaucoma and ocular hypertension	▶				
OCULAR SURFACE DISEASES						
OTX-CSI (cyclosporine intracanalicular insert)	Dry eye disease	▶				
OTX-DED (dexamethasone intracanalicular insert)	Episodic dry eye disease	▶				
DEXTENZA® (dexamethasone ophthalmic insert) 0.4 mg for intracanalicular use	Allergic conjunctivitis	▶				
SURGICAL						
Dextenza® (dexamethasone ophthalmic insert) 0.4mg	Post-surgical ocular inflammation and pain	▶				◀
ReSure® SEALANT	Cataract incision closure	▶				◀

*Wet Age-related Macular Degeneration (Wet AMD), Diabetic Macular Edema (DME), Retinal Vein Occlusion (RVO)

TOTAL GLOBAL MARKETS

DEVELOPING PRODUCTS WITH THE POTENTIAL TO BECOME A STANDARD OF CARE FOR SELECT INDICATIONS IN SEVERAL OF THE LARGEST SEGMENTS IN OPHTHALMOLOGY



KEY UNMET NEED

These data reflect the total global market for the respective indications. Our market opportunity for such indications reflects a portion of this market.

* †Data shown here is only representative of Dry Eye and not other Ocular Surface Diseases

1. 2019 Retina Pharma Market Scope Report 2. 2019 Glaucoma Pharma Market Scope Report 3. 2019 Dry Eye Market Scope Report 4. Estimated using historical costs of topical eyedrops (not DEXTENZA) and the total addressable market based on the total US ocular surgical steroid market value 2019

OTX-TKI (AXITINIB INTRAVITREAL IMPLANT)

SUSTAINED RELEASE THERAPY FOR RETINAL DISEASES

ISSUES WITH EXISTING TREATMENTS

- Require injections every 4-8 weeks^{1,2}
- May cause endophthalmitis, hemorrhage, damage to the lens or retinal detachment due to repeated injections³
- Cause discomfort, eye pain, decreased vision, increased photosensitivity, and floaters³

KEY PRODUCT ATTRIBUTES

- Targeting sustained release for 6 months or longer
- Broader anti-angiogenic profile (small molecule) than anti-VEGF alone
- Small fiber with minimal/no visual impact
- Preservative-free



ONGOING PHASE I CLINICAL TRIALS IN AUS & US

1. EYLEA Full Prescribing information 2019 2. Lucentis full Prescribing Information 2019 3. Bochot A, Fattal E. Liposomes for intravitreal drug delivery: a state of the art. *J Control Release*. 2012;161(2):628-634.

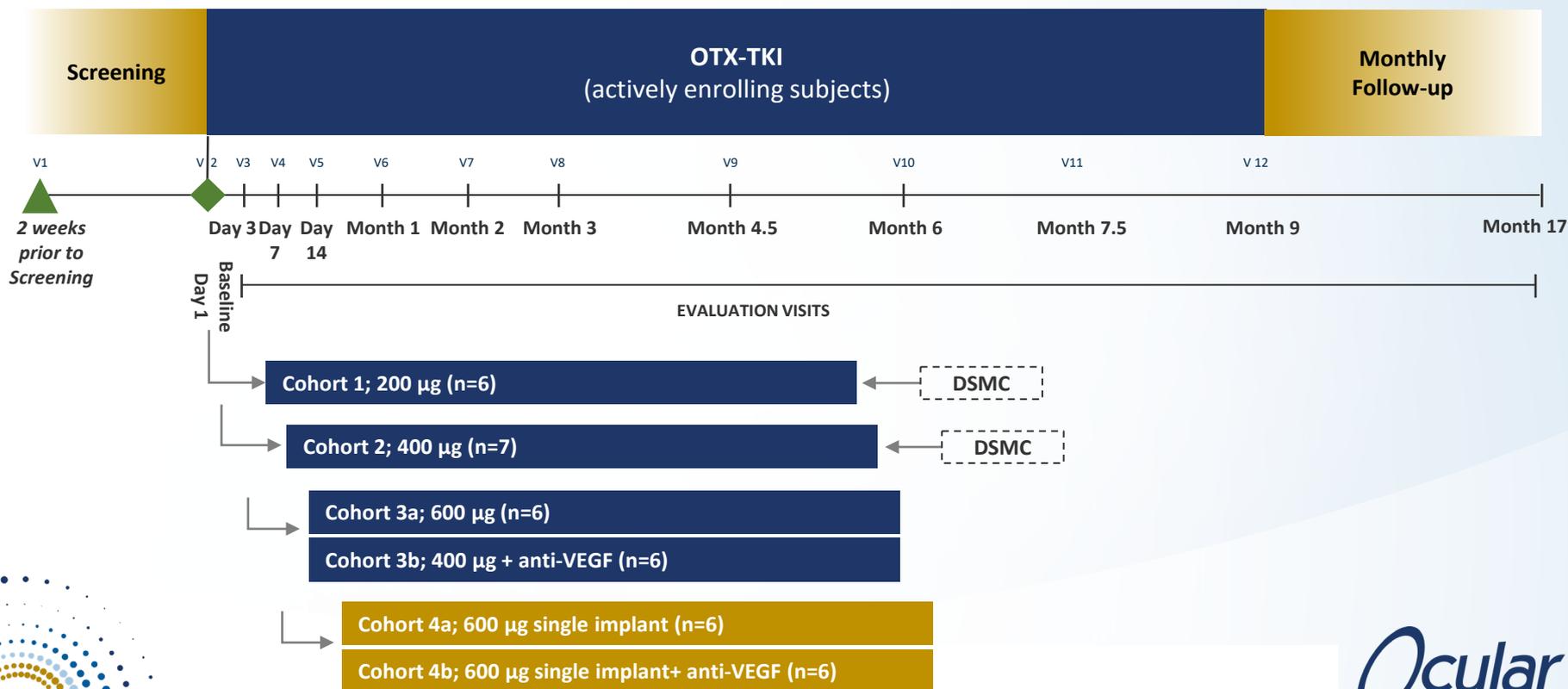
AUS-BASED OTX-TKI PHASE 1 STUDY

DESIGN

- Open-label, dose-escalation, feasibility study
- 5 sites in Australia
- One eye treated per patient
- Key Inclusion criteria:
 - Active primary sub foveal neovascularization (SFNV) secondary to AMD – previously treated or naïve subjects but with retinal fluid present

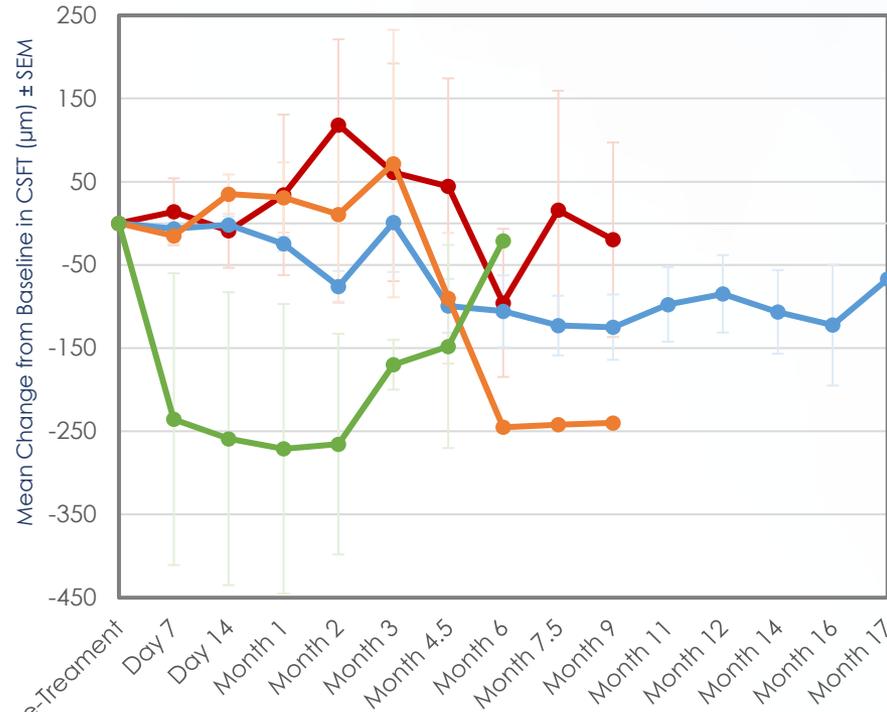
OBJECTIVES

- Safety, tolerability, and biological activity
- Safety evaluations at all visits; mean change in central subfield thickness (CSFT) measured by SD-OCT, BCVA, and clinically-significant leakage on FA and/or OCT-A



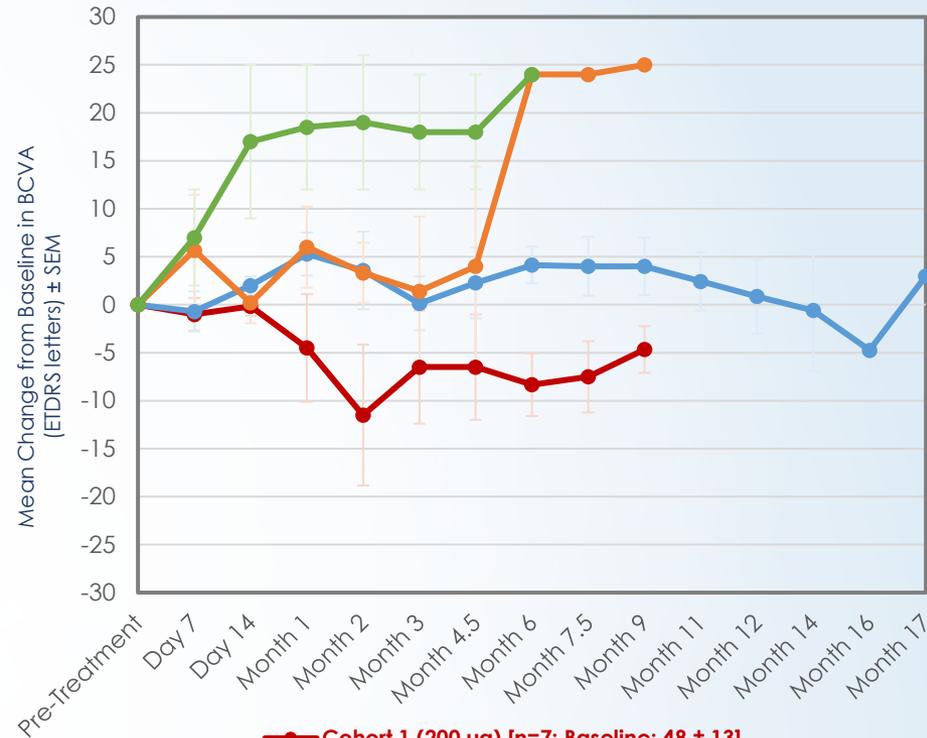
ALL COHORTS: MEAN CHANGE IN CSFT AND BCVA

CHANGE FROM BASELINE IN CSFT



- Cohort 1 (200 µg) [n=6; Baseline: 680 ± 159 µm]
- Cohort 2 (400 µg) [n=7; Baseline: 450 ± 29 µm]
- Cohort 3a (600 µg) [n=6; Baseline: 521 ± 68 µm]
- Cohort 3b (400 µg + Anti-VEGF) [n=2; Baseline: 511 ± 88 µm]

CHANGE FROM BASELINE IN BCVA



- Cohort 1 (200 µg) [n=7; Baseline: 48 ± 13]
- Cohort 2 (400 µg) [n=6; Baseline: 62 ± 8.5]
- Cohort 3a (600 µg) [n=6; Baseline: 44 ± 6.8]
- Cohort 3b (400 µg + Anti-VEGF) [n=2; Baseline: 23 ± 5]

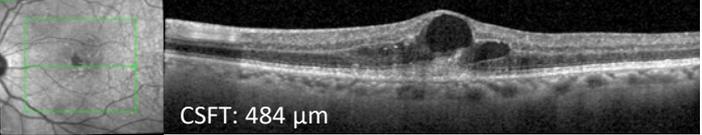
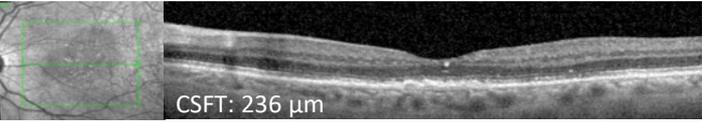
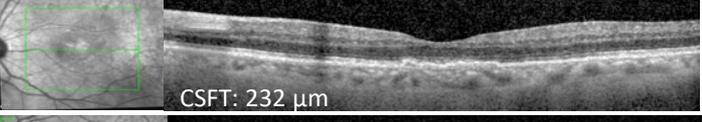
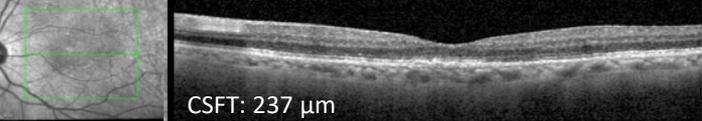
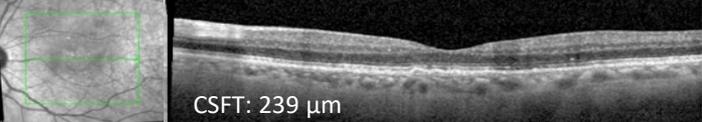
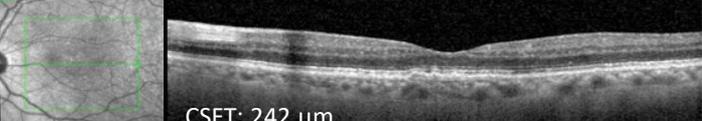
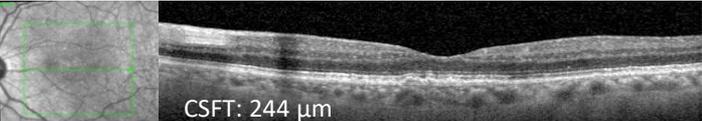
Cohort 1: n=6 until Month 9; Cohort 2: n=7 until Month 12, n=5 for Month 14, n=4 for Month 16 & n=1 for Month 17
 Cohort 3a: n=6 until Month 2, n=4 for Months 3; n=3 for Month 4.5 & n=1 until Month 9; Cohort 3b: n=2 until Month 4.5; n=1 for Month 6

*All BCVA and CSFT values compared to Baseline visit; NOTE: Interim review, unmonitored data; Data cut on April 12th, 2021

OTX-TKI PHASE 1 SD-OCT EVALUATION: COHORT 3

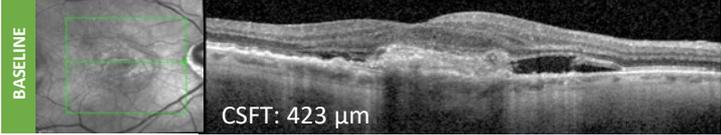
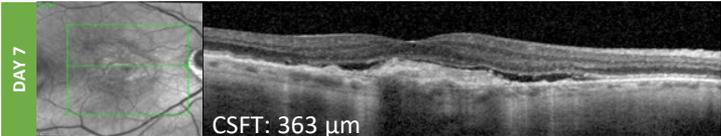
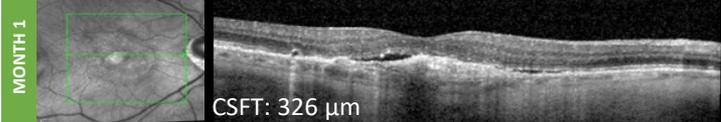
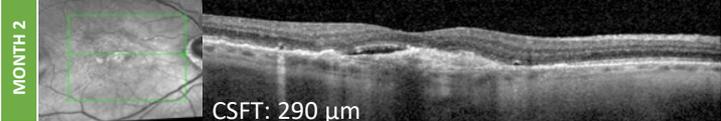
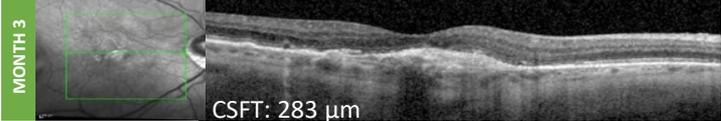
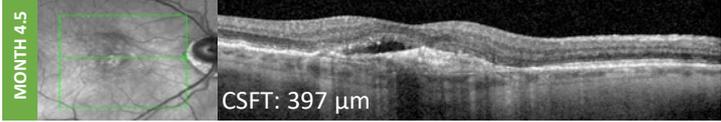
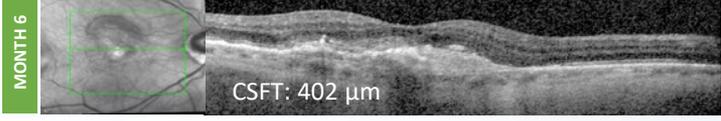
Cohort 3a (600µg):

Subject 1 (OS): Treatment Naïve Subject

		BCVA
BASELINE		0.58 (20/76)
MONTH 2		0.22 (20/33)
MONTH 3		0.24 (20/40)
MONTH 4.5		0.1 (20/25)
MONTH 6		0.1 (20/25)
MONTH 7.5		0.1 (20/25)
MONTH 9		0.08 (20/24)

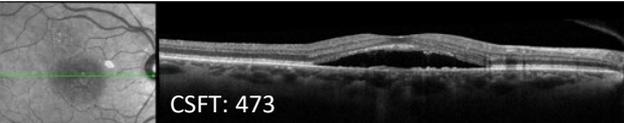
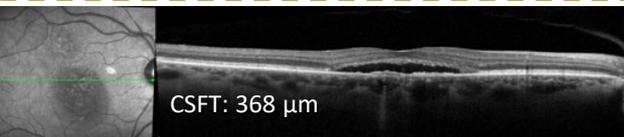
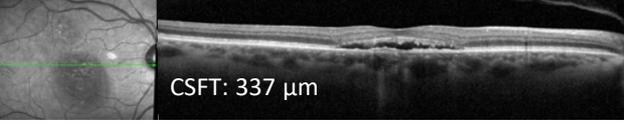
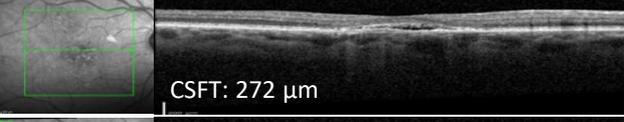
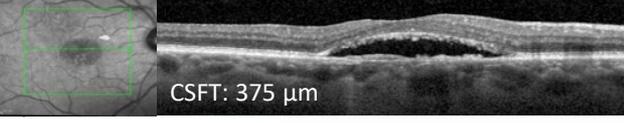
Cohort 3b (400µg + Anti-VEGF):

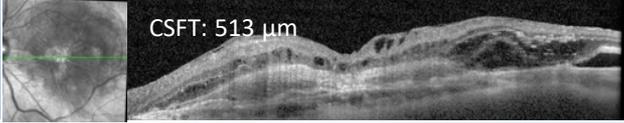
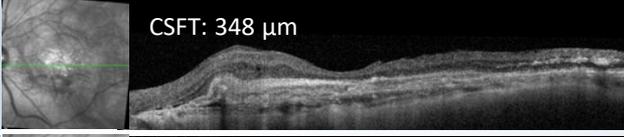
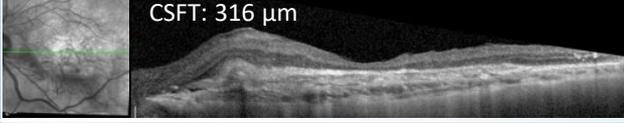
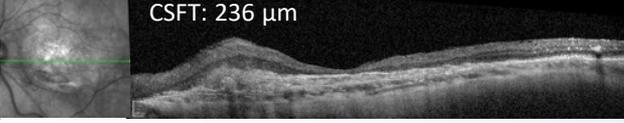
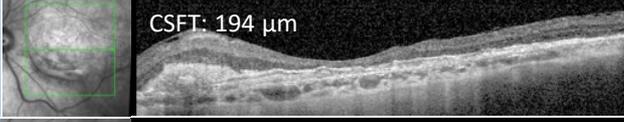
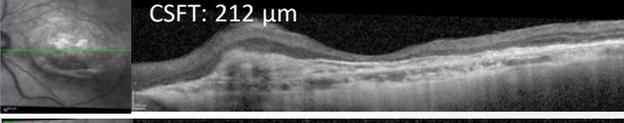
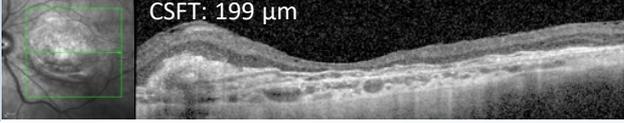
Subject 1 (OD): Treatment Naïve Subject

		BCVA
BASELINE		1.14 (20/252)
DAY 7		1.1 (20/252)
MONTH 1		0.64 (20/87)
MONTH 2		0.62 (20/83)
MONTH 3		0.66 (20/91)
MONTH 4.5		0.66 (20/91)
MONTH 6		0.66 (20/91)

*NOTE: Interim review, unmonitored data; Data cut on April 12th, 2021

OTX-TKI PHASE 1 SD-OCT EVALUATION: COHORT 2

Cohort 2 (400µg): Subject 1 (OD): History of Aflibercept Q4 Weeks for 16 months		BCVA
BASELINE	 CSFT: 473	-0.04 (20/18)
MONTH 2	 CSFT: 368 µm	-0.06 (20/17)
MONTH 3	 CSFT: 337 µm	-0.06 (20/17)
MONTH 6	 CSFT: 234 µm	-0.08 (20/17)
MONTH 9	 CSFT: 272 µm	-0.06 (20/17)
MONTH 11	 CSFT: 275 µm	0.02 (20/21)
MONTH 13.5	 CSFT: 375 µm	-0.12 (20/15)

Cohort 2 (400µg): Subject 2 (OS): Treatment Naïve Subject		BCVA
BASELINE	 CSFT: 513 µm	1.40 @ 1m (20/502)
MONTH 2	 CSFT: 348 µm	1.40 @ 1m (20/502)
MONTH 3	 CSFT: 316 µm	1.48 @ 1m (20/604) Rescued at Month 4.5
MONTH 6	 CSFT: 236 µm	1.34 @ 1m (20/438) Rescued at Month 6 & 7.5
MONTH 9	 CSFT: 194 µm	1.44 @ 1m (20/551)
MONTH 11	 CSFT: 212 µm	1.44 @ 1m (20/551)
MONTH 16	 CSFT: 199 µm	1.44 @ 1m (20/551)

*NOTE: Interim review, unmonitored data; Data cut on April 12th, 2021; BCVA presented in logMAR format with Snellen equivalent in parenthesis

PHASE I RESULTS DEMONSTRATING DURATION OF EFFECT

Percentage of Subjects Without Needing Rescue Medications

Extended Follow-up

Cohorts	At 1 months % (n/N)	At 3 months % (n/N)	At 6 months % (n/N)	At 7.5 months % (n/N)	At 9 months % (n/N)	At 12 months % (n/N)	At 14 months % (n/N)	At 17 months % (n/N)
Cohort 1 (200 µg)	100 (6/6)	66.7 (4/6)	50 (3/6)	50 (3/6)	50 (3/6)	NA	NA	NA
Cohort 2 (400 µg)*	85.7 (6/7)	71.4 (5/7)	57.1 (4/7)	42.9(3/7)	42.9 (3/7)	28.6(2/7)	20 (1/5)*	50 (1/1)*
Cohort 3a (600 µg)*	83.3 (5/6)	100 (4/4)*	100 (1/1)*	100 (1/1)*	100 (1/1)*	TBD	TBD	TBD
Cohort 3b (400 µg + anti-VEGF)*	100 (2/2)*	100 (2/2)*	50 (1/2)*	TBD	TBD	TBD	TBD	TBD

*Follow-up ongoing

*NOTE: Interim review, unmonitored data; Data cut on April 12th, 2021

AUS-BASED OTX-TKI PHASE 1 STUDY CONCLUSIONS TO DATE

❑ OTX-TKI was generally well tolerated

- To date, observed to have a favorable safety profile, with no ocular serious adverse events in treatment naïve & previously treated wet AMD patients
- No measurable systemic exposure to axitinib observed in cohorts 1-2

❑ Preliminary biological signal of clinically-meaningful decrease in retinal fluid

- Some subjects showed a decrease in intraretinal or subretinal fluid by 2 months in Cohorts 2 (400 µg) & 3a (600 µg)
- Combination of OTX-TKI + Anti-VEGF (Cohort 3b) showed a decrease in intraretinal or subretinal fluid immediately, as early as a week after treatment in two subjects

❑ Therapy durability suggests extended duration of action

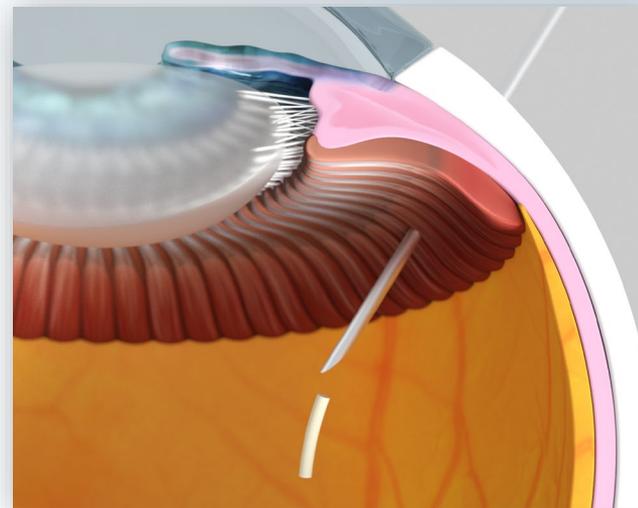
- Cohort 2 (400 µg): Several subjects demonstrated durability of therapy for up to 12 months
- Cohort 3: One subject has demonstrated durability of therapy for up to 9 months in the 600 µg group & another as demonstrated up to 6 months in the OTX-TKI + Anti-VEGF group

❑ Consistent bio-resorption observed

- Implant biodegraded in all subjects in Cohort 1 by 9-10.5 months

❑ Implant location observation suggests limited movement

- Implant has been able to be adequately monitored



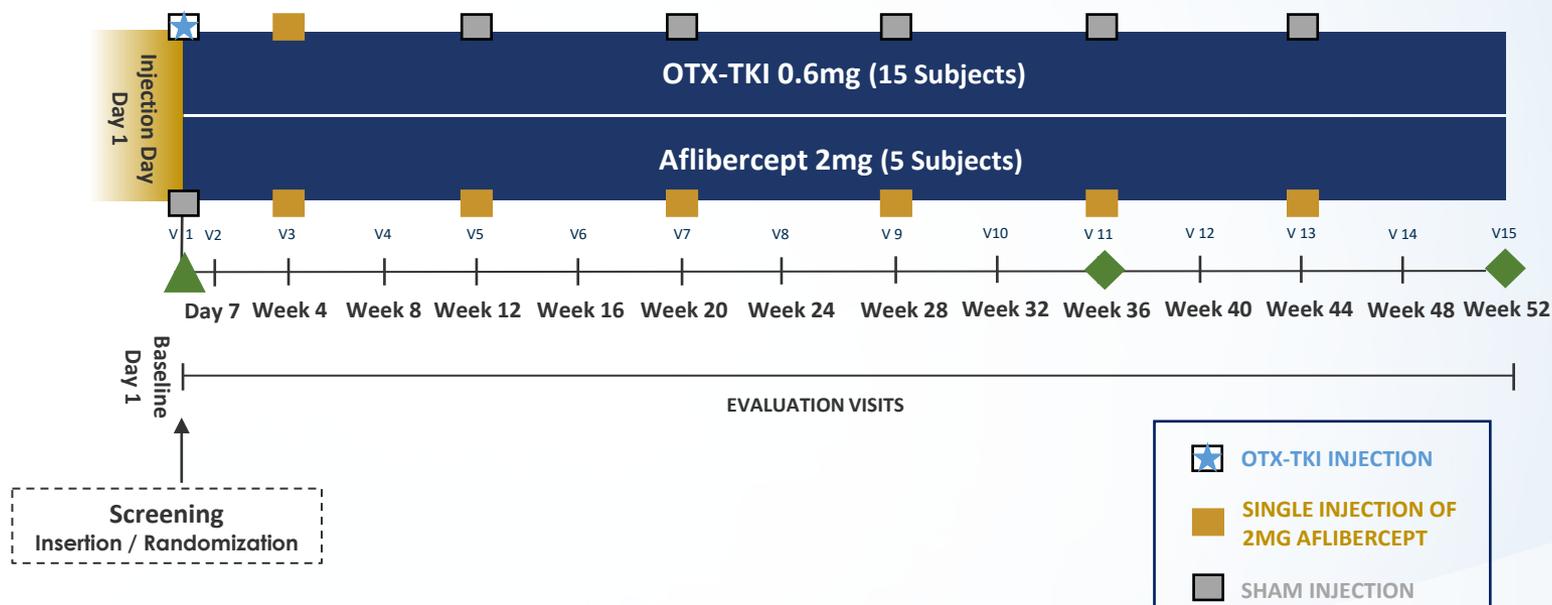
OTX-TKI PHASE 1 US STUDY

DESIGN

- Prospective, multi-center, double-masked, parallel-group study
- Approximately 5 US sites
- One eye treated per patient
- Key Inclusion criteria:
 - Previously treated anti-VEGF injection

OBJECTIVES

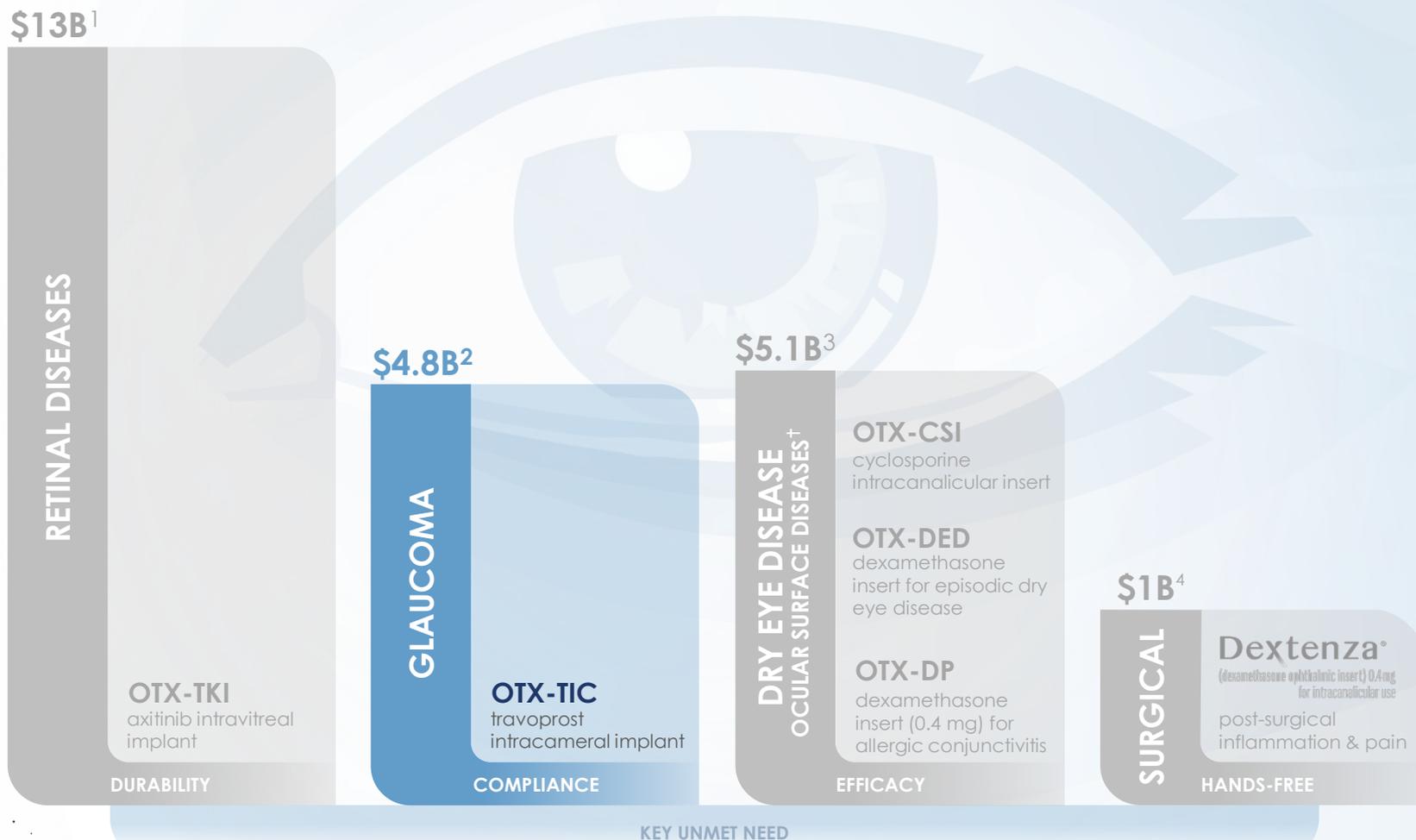
- Safety, tolerability, durability and biological activity
- BCVA, mean change in central subfield thickness (CSFT) measured by SD-OCT and safety evaluations at all visits



FIRST PATIENT DOSED IN JULY 2021

TOTAL GLOBAL MARKETS

DEVELOPING PRODUCTS WITH THE POTENTIAL TO BECOME A STANDARD OF CARE FOR SELECT INDICATIONS IN SEVERAL OF THE LARGEST SEGMENTS IN OPHTHALMOLOGY



These data reflect the total global market for the respective indications. Our market opportunity for such indications reflects a portion of this market.

[†]Data shown here is only representative of Dry Eye and not other Ocular Surface Diseases

1. 2019 Retina Pharma Market Scope Report 2. 2019 Glaucoma Pharma Market Scope Report 3. 2019 Dry Eye Market Scope Report 4. Estimated using historical costs of topical eyedrops (not DEXTENZA) and the total addressable market based on the total US ocular surgical steroid market value 2019

OTX-TIC (TRAVOPROST INTRACAMERAL IMPLANT)

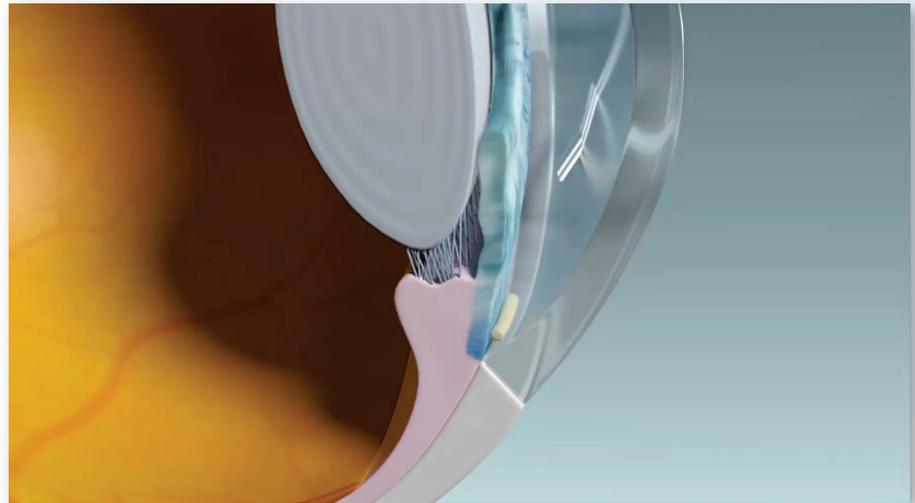
ADDRESSES THE ISSUE OF PATIENT NON-COMPLIANCE WITH EYE DROPS

ISSUES WITH EXISTING TREATMENTS

- High rates of non-adherence to glaucoma therapies
- Poor adherence has been shown to be associated with disease progression and blindness^{1,2}
- Ocular hyperemia
- Life-long daily burden of patient administration

KEY PRODUCT ATTRIBUTES

- Travoprost loaded microparticles embedded in hydrogel
- Administered with 27G or 26G needle
- Resides in the iridocorneal angle
- Fully biodegradable
- Preservative-free



1. Rossi GC, et al. Do adherence rates and glaucomatous visual field progression correlate? *Eur J Ophthalmol.* 2011; 21:410–4. 2. Sleath B, et al. The relationship between glaucoma medication adherence, eye drop technique, and visual field defect severity. *Ophthalmology.* 2011; 118:2398–402.

OTX-TIC FOR THE TREATMENT OF GLAUCOMA

Phase 1 Study Design

- Open-label, proof-of-concept study
- US study, 20 subjects at 5 sites
- One eye per patient will be treated
- Key Inclusion criteria:
 - Controlled ocular HTN or POAG
 - Open, normal anterior chamber angles on gonioscopy

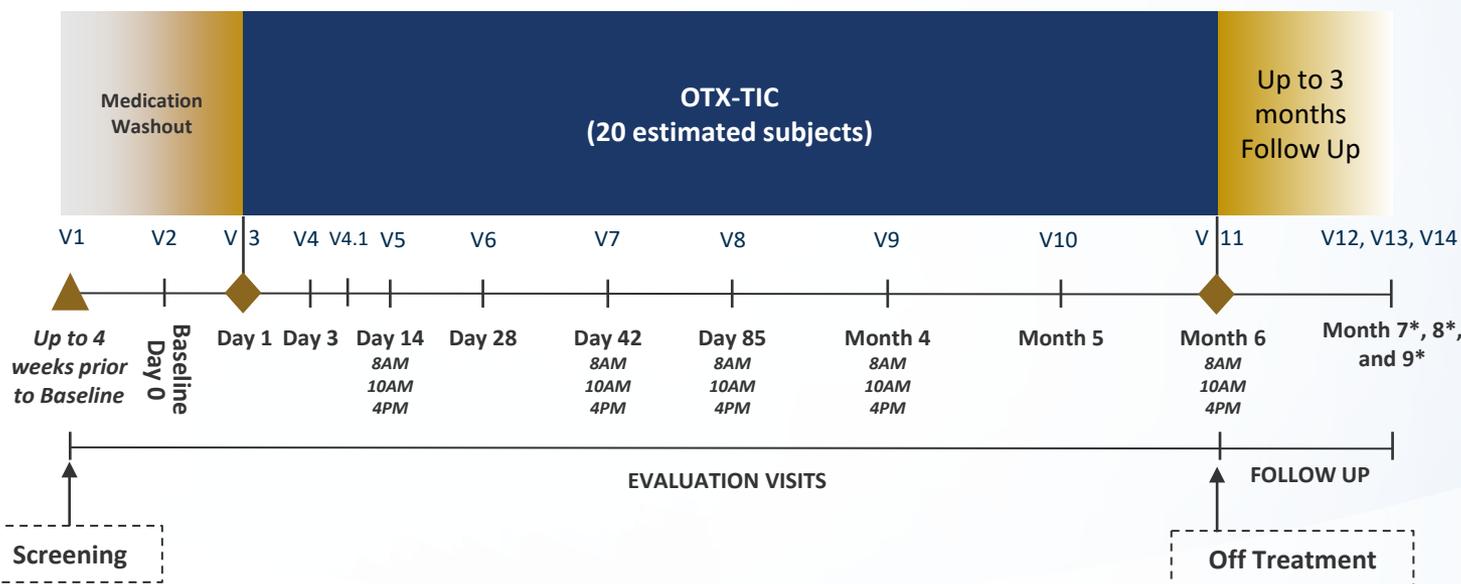
Objectives

- Safety, tolerability, and biological activity
- Diurnal IOP at Baseline, 2 weeks, 6 weeks, 12 weeks, Month 4, and Month 6 (8 AM, 10 AM, 4 PM)

Active Comparator:

- Non-study eye receives topical travoprost daily

PHASE 1 TRIAL COMPLETED



Cohort 1: 15µg

Cohort 2: 26µg

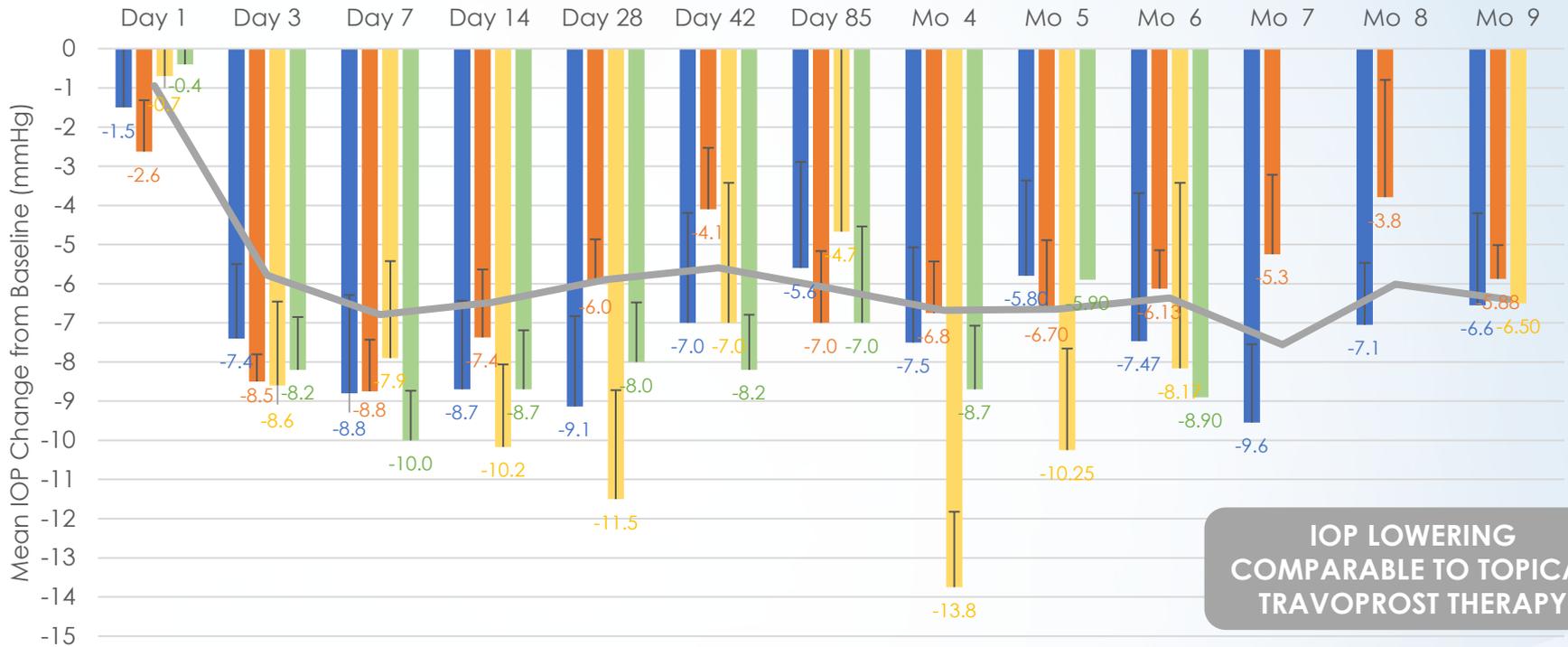
Cohort 3: 15µg
[Fast Degrading Hydrogel]

Cohort 4: 5µg
[Fast Degrading Hydrogel]

Monthly visits until IOP is within 10% of baseline or until clinically stable

ALL COHORTS: MEAN IOP CHANGE FROM BASELINE

IOP DECREASED AFTER 2 DAYS FOLLOWING OTX-TIC IMPLANTATION & LOWERING TO 7-11 MMHG RECORDED



IOP LOWERING COMPARABLE TO TOPICAL TRAVOPROST THERAPY

Cohort 1
15µg

Cohort 2
26µg

Cohort 3
15µg

Cohort 4
5µg

— NSE (travatan) All cohorts pooled

FAST-DEGRADING

FAST-DEGRADING

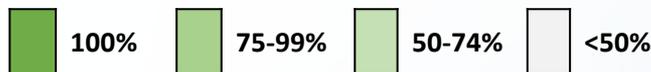
NB: Unmonitored data (BAM measurements). If the study eye was given other IOP lowering medication, the IOP value was removed from the analysis

ALL COHORTS: DURATION OF EFFECT WITH ONE IMPLANT

COHORT 2 SHOWED THE MOST CONSISTENT DURABLE RESPONSE IN ALL SUBJECTS UP TO MONTH 6 & 50% OF SUBJECTS UP TO MONTH 9

Percentage of Study Eyes Not Requiring Rescue Therapy After a Single Implant Administration

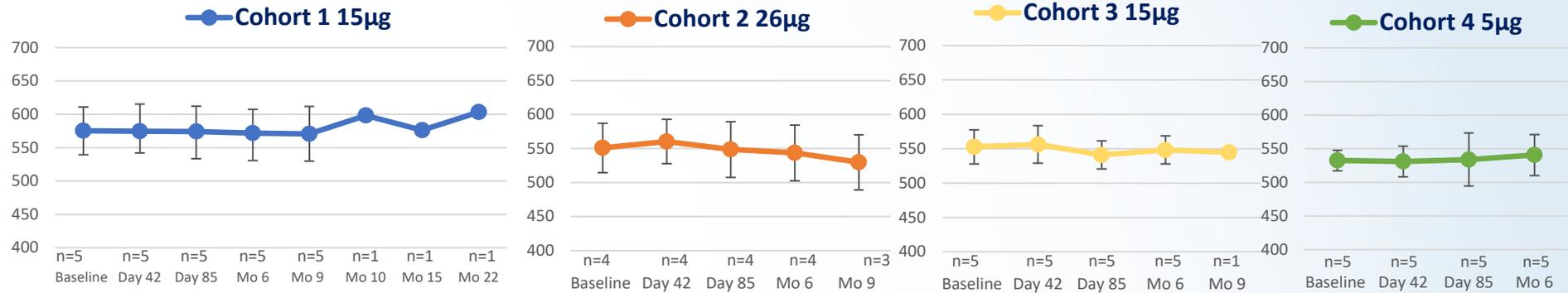
	Day 42 % (n/N)	Day 85 % (n/N)	Month 4 % (n/N)	Month 5 % (n/N)	Month 6 % (n/N)	Month 7 % (n/N)	Month 8 % (n/N)	Month 9 % (n/N)	Month 10-22 % (n/N)
Cohort 1 (15 µg) N=5	100(5/5)	100(5/5)	80(4/5)	80(4/5)	60(3/5)	40 (2/5)	40 (2/5)	40 (2/4)	20 (1/5)
Cohort 2 (26 µg) N=4	100(4/4)	100(4/4)	100(4/4)	100(4/4)	100(4/4)	100(4/4)	75(3/4)	50(2/4)	NA
Cohort 3 (15 µg) (Fast-degrading) N=5	100(5/5)	60(3/5)	40 (2/5)	40 (2/5)	40 (2/5)	20 (1/5)	20 (1/5)	20 (1/5)	NA
Cohort 4 (5 µg) (Fast-degrading) N=5	100(5/5)	100(5/5)	80(4/5)	80(4/5)	80(4/5)	NA	NA	NA	NA
Total	100 (19/19)	89 (17/19)	74 (14/19)	74 (14/19)	68 (13/19)	50 (7/14)	43 (6/14)	39 (5/13)	20 (1/5)



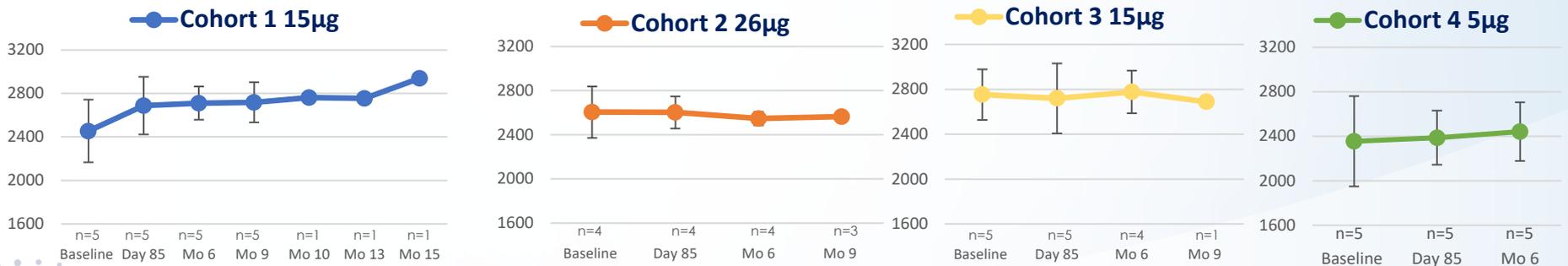
ALL COHORTS: NO EFFECT OBSERVED ON CORNEAL HEALTH

PACHYMETRY & ENDOTHELIAL CELL COUNTS INDICATE NO CLINICALLY-MEANINGFUL CHANGE FROM BASELINE

PACHYMETRY (μm)



ENDOTHELIAL CELL COUNTS (AUTOMATED)

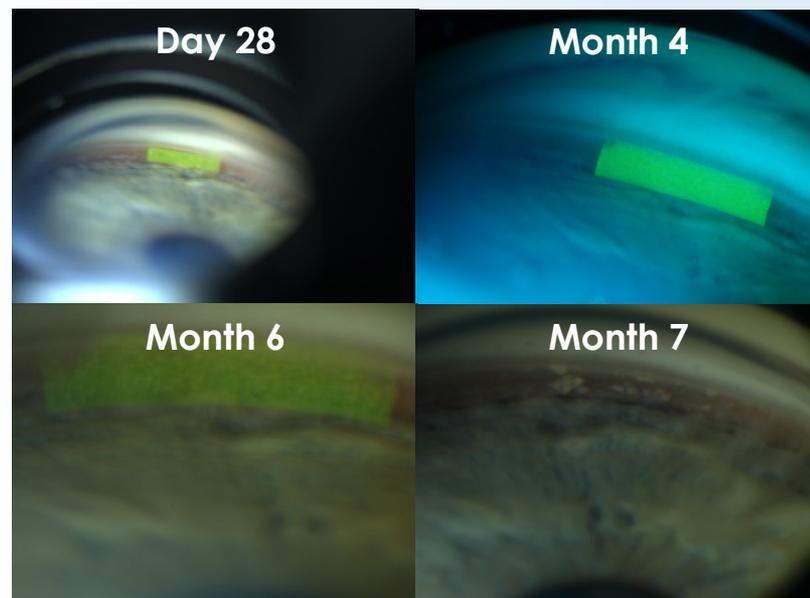


NB: Unmonitored data

OTX-TIC PHASE 1 INTERIM FINDINGS

- ✓ **Clinically-meaningful decrease in IOP**
Mean IOP values were decreased in patients receiving OTX-TIC as early as two days following administration, and mean IOP decrease was comparable to topical travoprost therapy
- ✓ **Extended duration of therapy**
Many subjects exhibited 6+ months duration of IOP-lowering effect in Cohorts 1 & 2, and between 3-6 months in Cohorts 3 & 4 (fast degrading implant) with a single implant; Longest and most consistent IOP lowering in Cohort 2
- ✓ **Consistently bioresorbable**
Implant biodegraded in 5-7 months (Cohorts 1 & 2); Fast degrading implants biodegraded in 3-5 months (Cohorts 3 & 4)
- ✓ **Implant location and limited movement**
Implant was not observed to move at slit lamp and was visible at all exams in all patients using gonioscopy
- ✓ **Corneal health**
Endothelial cell counts, pachymetry assessments, and slit lamp examinations indicate no changes from baseline

VISUALIZATION OF IMPLANT



OTX-TIC PHASE II STUDY PLANNED TO INITIATE IN Q4 2021

DESIGN

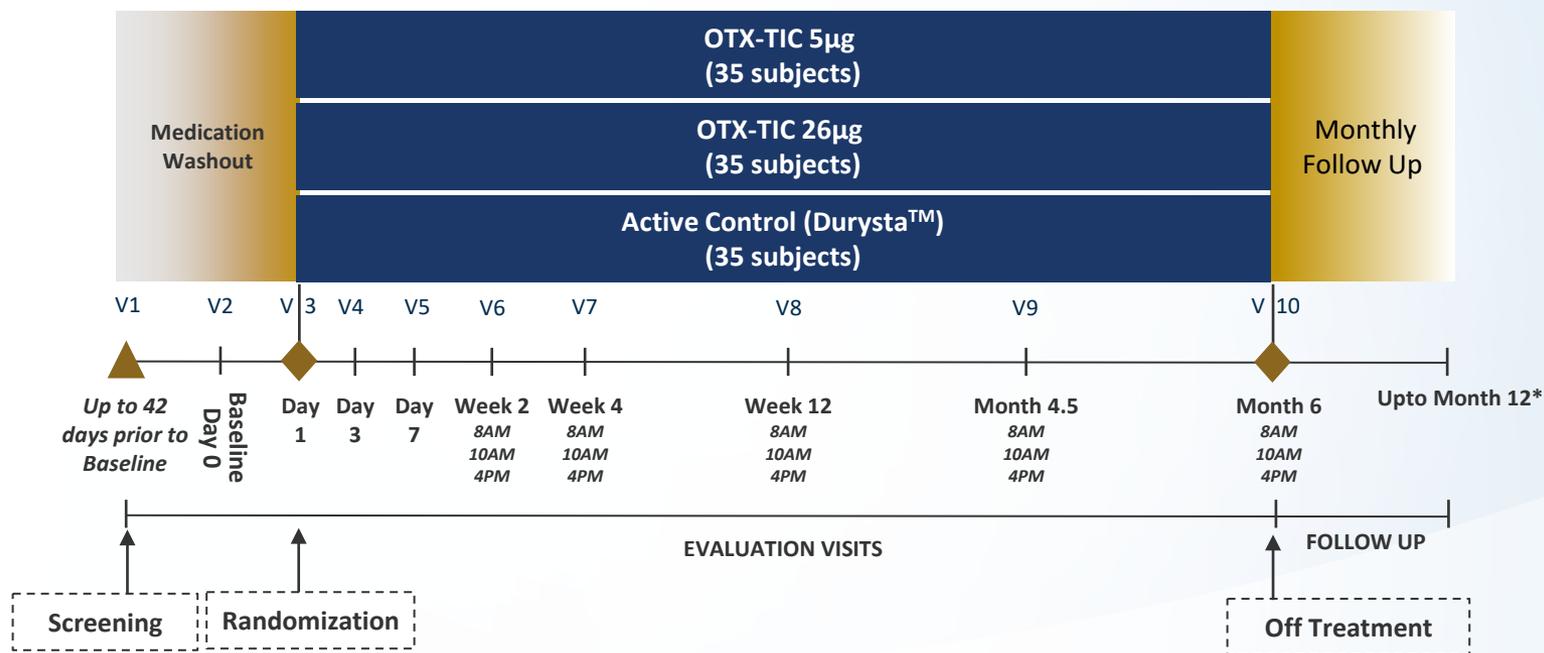
- Prospective, multi-center, randomized, parallel-group, controlled study
- Approximately 105 subjects at 15-20 US sites
- 35 subjects per arm, 3 arms; Randomization 1:1:1
- Key Inclusion criteria:
 - Controlled ocular HTN or POAG
 - Open, normal anterior chamber angles on gonioscopy

OBJECTIVES

- Safety, tolerability, and efficacy
- Diurnal IOP changes from baseline (8AM, 10AM, 4PM) at 2, 6, and 12 weeks

Active Comparator

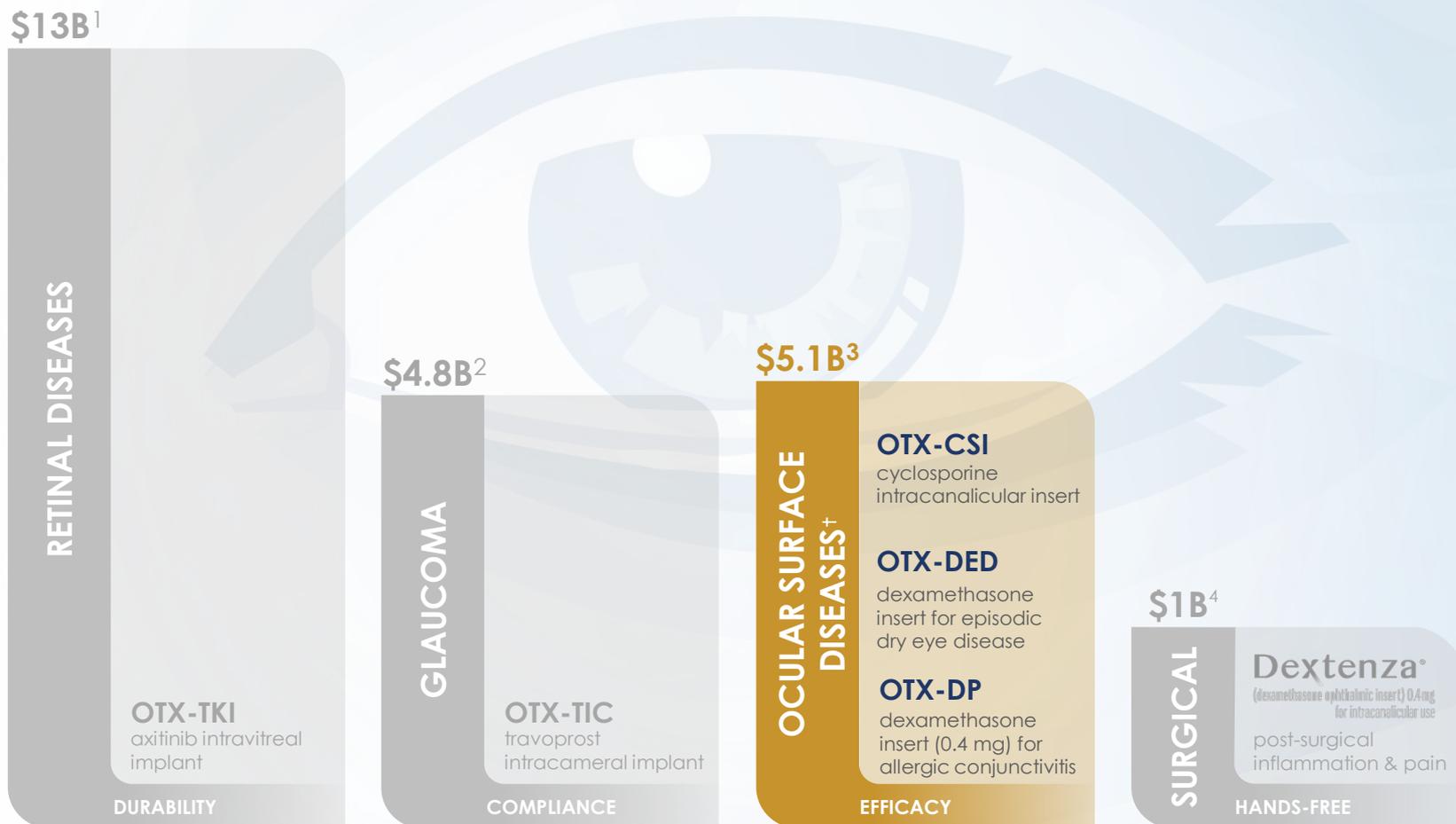
- Control arm eye receives one injection of Durysta™
- Non-study eye receives topical PGA daily



* Monthly visits until IOP is within 10% of baseline for up to 6 months, if needed

TOTAL GLOBAL MARKETS

DEVELOPING PRODUCTS WITH THE POTENTIAL TO BECOME A STANDARD OF CARE FOR SELECT INDICATIONS IN SEVERAL OF THE LARGEST SEGMENTS IN OPHTHALMOLOGY



KEY UNMET NEED

These data reflect the total global market for the respective indications. Our market opportunity for such indications reflects a portion of this market.

* In collaboration with REGENERON; †Data shown here is only representative of Dry Eye and not other Ocular Surface Diseases

1. 2019 Retina Pharma Market Scope Report 2. 2019 Glaucoma Pharma Market Scope Report 3. 2019 Dry Eye Market Scope Report 4. Estimated using historical costs of topical eyedrops (not DEXTENZA) and the total addressable market based on the total US ocular surgical steroid market value 2019

INTRACANALICULAR INSERTS

AN INNOVATION IN DRUG DELIVERY TO THE OCULAR SURFACE



Dexamethasone bathes the ocular surface



OTX-CSI (CYCLOSPORINE INTRACANALICULAR INSERT)

SUSTAINED RELEASE THERAPY FOR DRY EYE DISEASE

ISSUES WITH EXISTING TREATMENTS

- Slow onset of action for therapy
- High level of burning, stinging and irritation upon administration
- Burden of patient administration

KEY PRODUCT ATTRIBUTES

- Cyclosporine loaded in hydrogel
- Preservative-free
- Designed to deliver therapy up to 12 weeks with a single insert
- Occludes the punctum
- Fully biodegradable insert



**OTX-CSI PHASE 2 TRIAL
ENROLLMENT COMPLETED**



PHASE 1 STUDY OBJECTIVE AND DESIGN

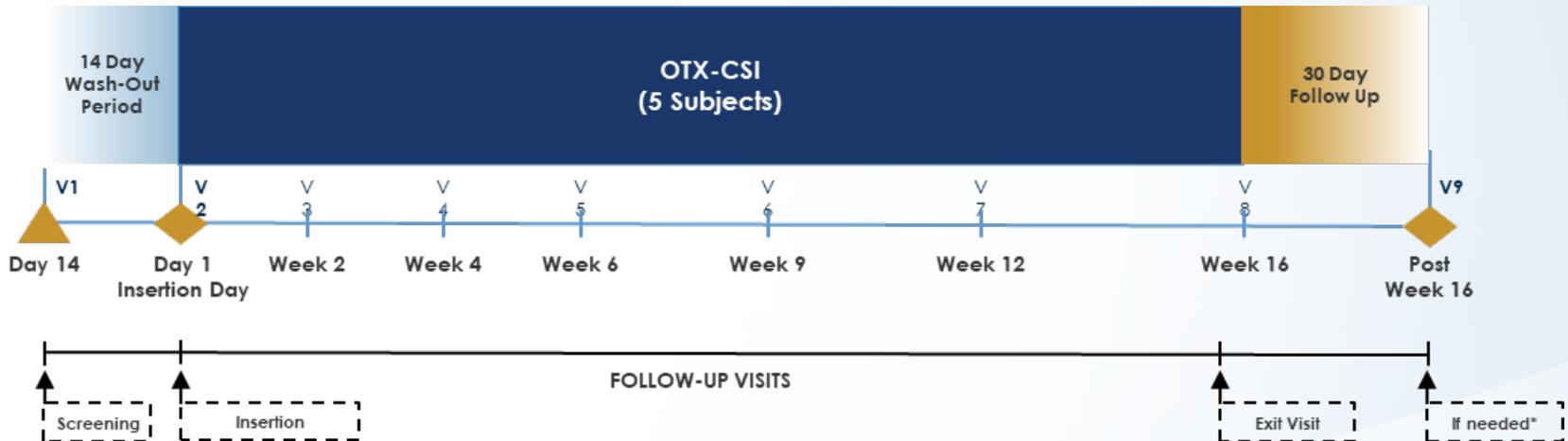
OBJECTIVE: EVALUATING THE SAFETY, TOLERABILITY, AND EFFICACY OF OTX-CSI FOR THE TREATMENT OF SUBJECTS WITH DRY EYE DISEASE

Design

- Phase 1, Prospective, Open-label study
- Key Inclusion criteria:
 - DED diagnosis in both eyes for ≥ 6 months
 - VAS eye dryness severity score ≥ 30

Endpoints

- Schirmer Test (without anesthesia) at Week 12
- Eye Dryness Score (visual analogue scale [VAS])
- Total Corneal Fluorescein Staining (tCFS) using NEI scale
- Presence of OTX-CSI or HV insert at all post-baseline visits
- Adverse Events (Ocular and Non-ocular)

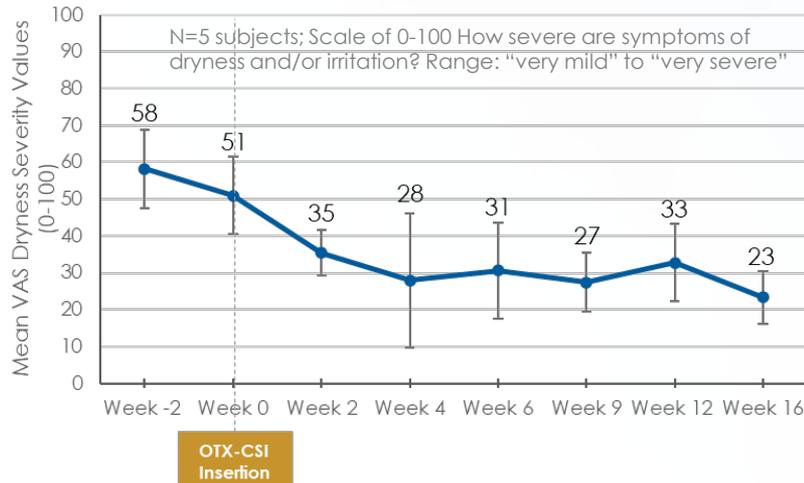


*Subject remains in study until insert is no longer visible and no evidence of biological activity

OTX-CSI PHASE 1 TRIAL RESULTS

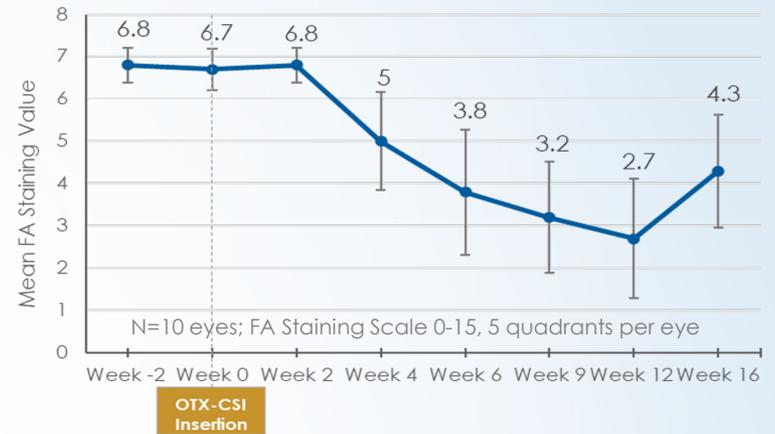
SUBJECTS REPORTED IMPROVEMENT IN DRYNESS SEVERITY ON A SCALE OF 0-100 (VERY MILD TO VERY SEVERE) OVER 16 WEEKS

Mean Absolute Values

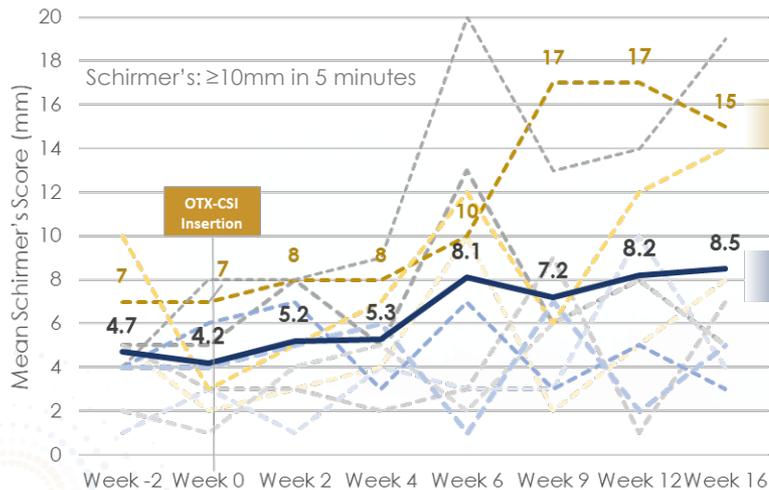


IMPROVED TOTAL CORNEAL FLUORESCEIN STAINING VALUES WEEK 4 TO 16 COMPARED TO BASELINE

Mean Absolute Values



SUBJECTS SHOWED AN IMPROVEMENT IN MEAN SCHIRMER'S TEST SCORES FROM WEEK 0 TO WEEK 16



20% (1/5) of subjects showed ≥ 10 mm increase from baseline (7 mm at Week 0 to 17 mm at Week 12)

Mean Schirmer's Score improved from 4.2mm at Week 0 to 8.2mm at Week 12

--- Individual Eye Data (N=10 eyes)
 — Mean Data

OTX-CSI WAS GENERALLY OBSERVED TO HAVE A FAVORABLE SAFETY PROFILE & WAS WELL TOLERATED

No AEs of stinging, burning, irritation, tearing, or blurred vision were reported over the 16-week period

PHASE 2 STUDY OBJECTIVE AND DESIGN

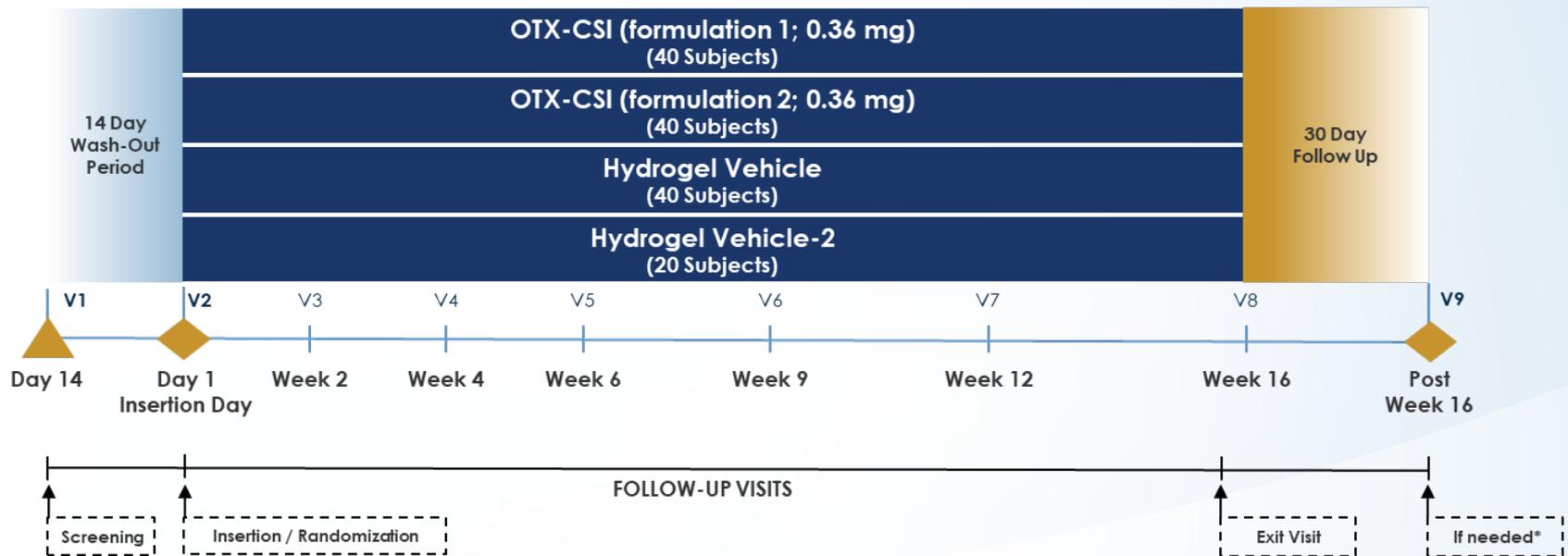
OBJECTIVE: EVALUATING THE SAFETY, TOLERABILITY, AND EFFICACY OF OTX-CSI FOR THE TREATMENT OF SUBJECTS WITH DRY EYE DISEASE

Design

- Prospective, Randomized, Double-Masked, Vehicle-controlled study
- Key Inclusion criteria:
 - DED diagnosis in both eyes for ≥ 6 months
 - VAS eye dryness severity score ≥ 30

Endpoints

- Schirmer Test (without anesthesia) at Week 12
- Eye Dryness Score (visual analogue scale [VAS])
- Total Corneal Fluorescein Staining (tCFS) using NEI scale
- Presence of OTX-CSI or HV insert at all post-baseline visits
- Adverse Events (Ocular and Non-ocular)



*Subject remains in study until insert is no longer visible and no evidence of biological activity

Study to Evaluate the Safety, Tolerability, and Efficacy of OTX-CSI in Subjects With Dry Eye Disease. ClinicalTrials.gov.
<https://clinicaltrials.gov/ct2/show/NCT04362670>. Accessed October 16, 2020.

PHASE 2 TRIAL NOW FULLY ENROLLED

OTX-DED (DEXAMETHASONE INTRACANALICULAR INSERT)

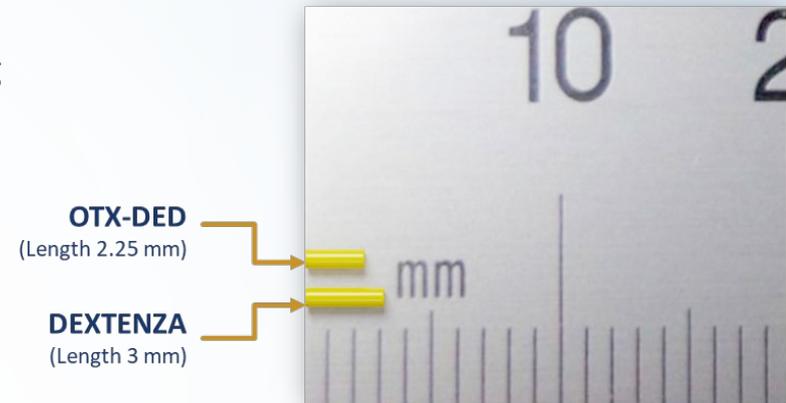
OFF-LABEL STEROIDS ARE CURRENTLY USED TO TREAT EPISODIC DRY EYE

ISSUES WITH EXISTING TREATMENTS

- Approved therapies for the chronic treatment of DED are known for slow onset of action & burning/stinging upon application
- Topical steroids (which are not FDA-approved for DED except for the recently FDA approved Eysuvis™-Kala Pharmaceuticals, Inc)¹ can be abused and contain preservatives causing ocular toxicity

KEY PRODUCT ATTRIBUTES

- Dexamethasone loaded in hydrogel
- Preservative-free
- Occludes the canaliculus providing more rapid onset of action
- Fully biodegradable insert
- Leverages strong safety profile of DEXTENZA®



Rendering showing OTX-DED is shorter in length than DEXTENZA

1. Kala Pharmaceuticals, Inc. Accessed March 5, 2021. <https://investors.kalarx.com/news-releases/news-release-details/kala-pharmaceuticals-announces-fda-approval-eyvisuvis-short-term/>

PHASE 2 STUDY OBJECTIVE AND DESIGN

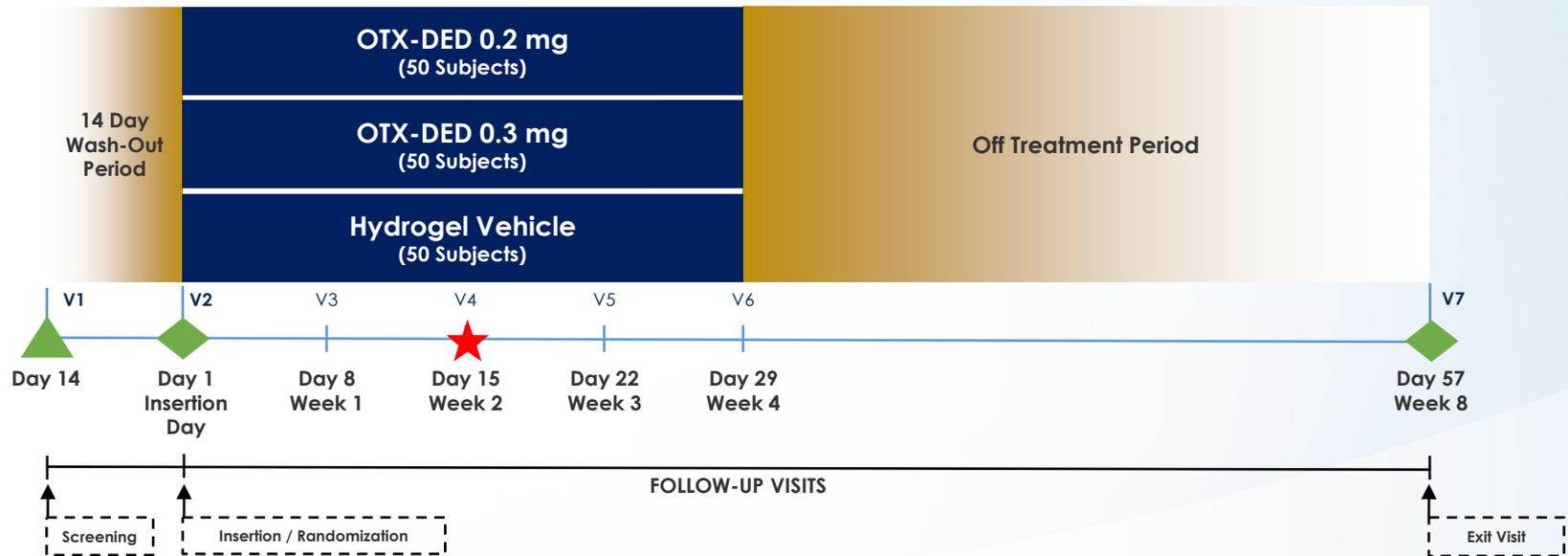
OBJECTIVE: EVALUATING THE EFFICACY AND SAFETY OF OTX-DED FOR THE SHORT-TERM TREATMENT OF SIGNS AND SYMPTOMS OF DRY EYE DISEASE

Design

- Prospective, Randomized, Double-Masked, Vehicle-controlled study
- Key Inclusion criteria:
 - DED diagnosis in both eyes for ≥ 6 months
 - VAS eye dryness severity score ≥ 30
 - Bulbar conjunctival hyperemia grade ≥ 2 (CCLRU scale)

Endpoints

- Conjunctival Hyperemia at Week 2
- Eye Dryness Score (visual analogue scale [VAS])
- Total Corneal Fluorescein Staining (tCFS) using NEI scale
- Adverse Events (Ocular and Non-ocular)



PHASE 2 TRIAL NOW FULLY ENROLLED

DEXAMETHASONE OPHTHALMIC INSERT FOR THE TREATMENT OF ALLERGIC CONJUNCTIVITIS

OCULAR'S FIRST POTENTIAL IN-OFFICE INDICATION

ISSUES WITH EXISTING TREATMENTS

- Eyedrop treatment requires frequent administration, and hands touching face several times/day
- Corticosteroids:
 - ✓ effective in treating signs & symptoms of acute and chronic allergy
 - ✓ not often prescribed due to the ability to abuse/overuse

KEY PRODUCT ATTRIBUTES

- Non-abusable, hands-free and preservative-free formulation
- Leverages strong safety profile for DEXTENZA in the treatment inflammation and pain following ophthalmic surgery

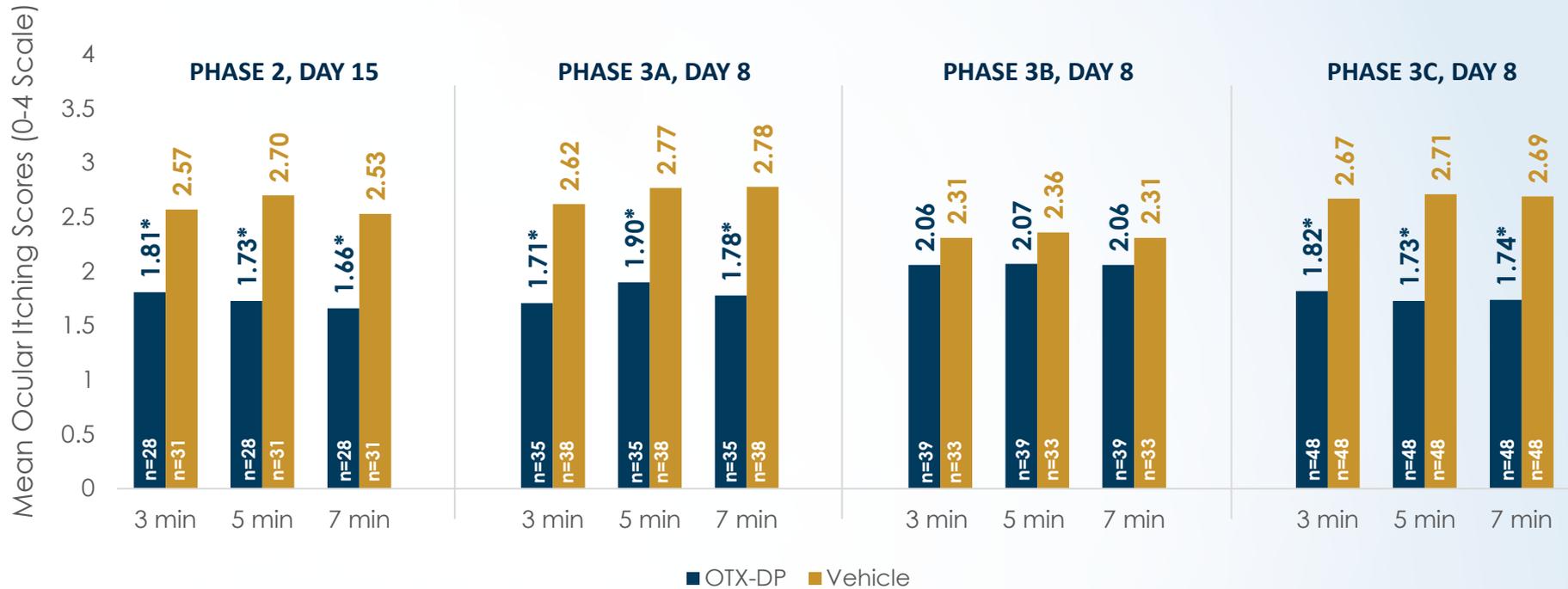
STAGED MARKET ENTRY IN Q4 2021 (PENDING FDA APPROVAL)

- Initial focus on dual targets (surgical and AC)
- Assess HCP demand across AC patient segments, and evaluate payer dynamics
 - High incidence of co-morbidity with ocular surface diseases, and administration of anti-histamines and preservatives can exacerbate DED
- Define office and physician archetypes, prioritizing those most likely to adopt



PDUFA date for sNDA: October 18, 2021

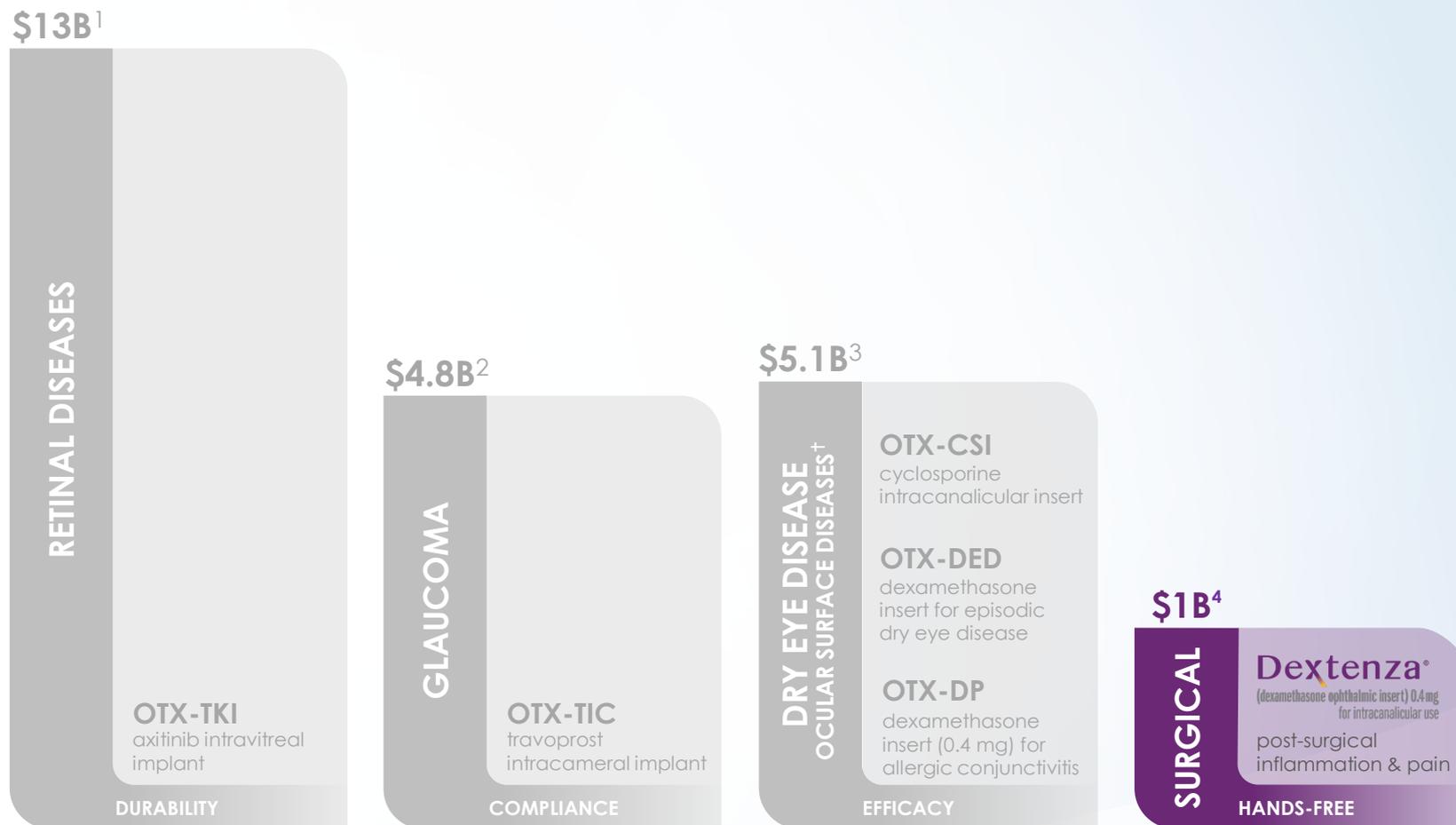
RESULTS: PRIMARY EFFICACY ENDPOINT MEAN OCULAR ITCHING SCORES ACROSS ALL STUDIES



*Statistically Significant; $P \leq 0.0025$; Population: ITT + LOCF (Phase 2) & ITT + MCMC (subject level imputation, Phase 3)

GLOBAL MARKET VALUES

DEVELOPING PRODUCTS WITH THE POTENTIAL TO BECOME A STANDARD OF CARE FOR SELECT INDICATIONS IN SEVERAL OF THE LARGEST SEGMENTS IN OPHTHALMOLOGY



KEY UNMET NEED

These data reflect the total global market for the respective indications. Our market opportunity for such indications reflects a portion of this market.

^{††}Data shown here is only representative of Dry Eye and not other Ocular Surface Diseases

1. 2019 Retina Pharma Market Scope Report 2. 2019 Glaucoma Pharma Market Scope Report 3. 2019 Dry Eye Market Scope Report 4. Estimated using historical costs of topical eyedrops (not DEXTENZA) and the total addressable market based on the total US ocular surgical steroid market value 2019

THE UNMET NEED IN TREATMENT OF PAIN AND INFLAMMATION FOLLOWING SURGERY

EYE DROPS HAVE POOR CORNEAL RESIDENCE TIME^{3,4}



LESS THAN
5%
OF DROPS
REACH
OCULAR
TISSUE

STEROID DROPS ARE THE MOST COMPLEX POST-OP CATARACT TREATMENT REGIMEN

Common clinical approach: 4 weeks with taper¹

	SUN	MON	TUES	WED	THURS	FRI	SAT	TAPER
Week 1	3 drops	~ 28 drops						
Week 2	2 drops	~ 21 drops						
Week 3	1 drop	~ 14 drops						
Week 4	0 drops	~ 7 drops						

~70
DROPS²

Ocular rebound inflammation may develop secondary to rapid tapering or abrupt discontinuation of steroids³

1. Kessel L et al. *Ophthalmology*. 2014;121(10):1915-24. 2. Data on file 00663. Ocular Therapeutix Inc. 3. Renfro L, Snow JS. *Dermatol Clin*. 1992;10(3):505-512 3. Kushwaha SK et al. *Int J Pharm Investig*. 2012;2(2):54-60. 4. Gaudana,R, et al. *AAPS Journal*. 2010;12 (3):348-360.

DEXTENZA® (DEXAMETHASONE OPHTHALMIC INSERT)

A HANDS-FREE ALTERNATIVE TO EYE DROPS

FDA approved for the treatment of ocular inflammation and pain following ophthalmic surgery

REIMBURSEMENT AND CODING

Product Code: J1096 **Procedure Code:** 0356T

- Medicare Administrative Contractor coverage provides physician reimbursement for procedure of ~\$100
- AMA granted permanent Category 1 CPT code effective Jan 2022 (applies to DEXTENZA and all future products in canaliculus)

1
INNOVATIVE
INSERT

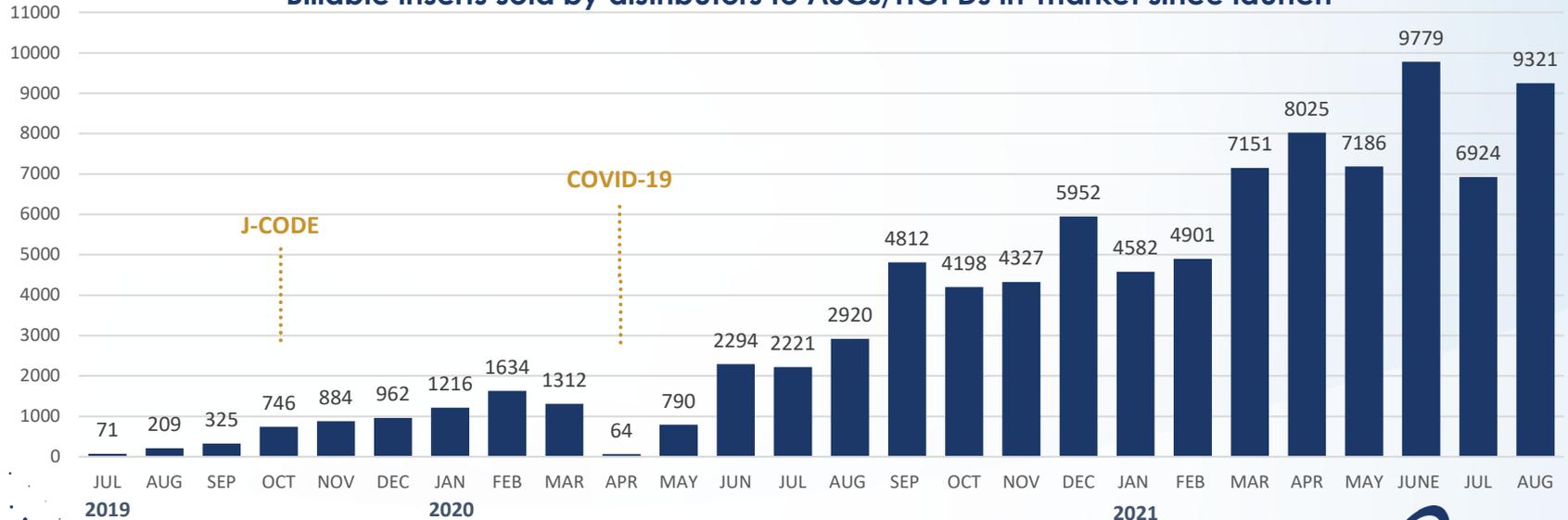
VS

~70
DROPS^{1,2}

Provides a tapered delivery of preservative-free steroid onto the ocular surface for 30 days

Strong momentum continues into 2021

Billable inserts sold by distributors to ASCs/HOPDs in-market since launch



1. DEXTENZA [package insert]. Bedford, MA: Ocular Therapeutix Inc; 2019.
2. Data on file 00663. Ocular Therapeutix Inc.

2021-2022 MILESTONES

- 
- OTX-TKI (wet AMD)** – First patient dosed in US clinical trial in July 2021 & dosing fourth cohort in Australia trial using the single 600µg implant
 - OTX-TIC (glaucoma)** – Plan to initiate Phase 2 clinical trial in Q4 2021
 - OTX-CSI (dry eye)** – Expect topline data from Phase 2 clinical trial in Q4 2021
 - OTX-DED (episodic dry eye)** – Expect topline data from Phase 2 clinical trial Q1 2022
 - DEXTENZA® (inflammation and pain)** – Expect to continue strong growth of in-market sales
 - OTX-DP (allergic conjunctivitis)** – Target PDUFA date for sNDA: 18 October 2021

(NASDAQ: OCUL)

TRANSFORMING
DRUG DELIVERY
LEVERAGING A NOVEL
TECHNOLOGY PLATFORM

THANK YOU



Ocular
Therapeutix™