(NASDAQ: OCUL)

TRANSFORMING DRUG DELIVERY

LEVERAGING A NOVEL TECHNOLOGY PLATFORM

ANTONY MATTESSICH, CHIEF EXECUTIVE OFFICER

November 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 the effectiveness of and amounts applicable to 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 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 successfully develop and commercialize products for the ophthalmology office setting, 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 meet supply demands, 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.

This presentation discusses investigational agents in development and no conclusions can or should be drawn relating to the efficacy or safety of these agents. There is no guarantee that any investigational agents will successfully complete clinical development or gain FDA approval.

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TRANSFORMING DRUG DELIVERY WITH A NOVEL TECHNOLOGY PLATFORM

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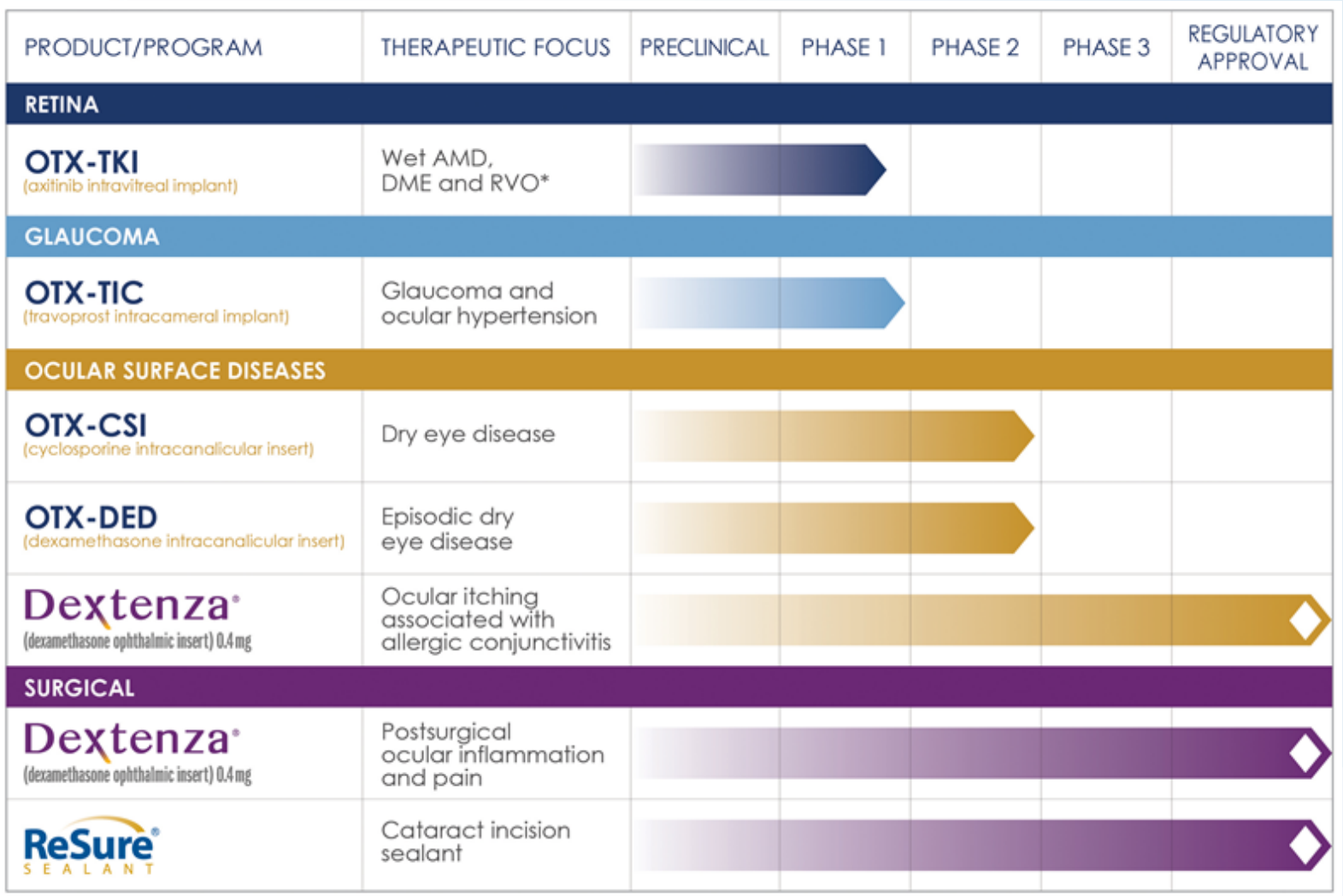
PIPELINE AT A GLANCE



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

DEXTENZA [package insert]. Bedford, MA: Ocular Therapeutix Inc; 2021 https://www.dextenza.com/wp-content/uploads/DEXTENZA-Full-Prescribing-Information.pdf
ReSure Sealant. Instructions for Use. LCN 80-1004-011 Rev C. Ocular Therapeutix, Inc., Bedford, MA. https://www.resuresealant.com/wp-content/uploads/2021/03/LCN-80-1004-011-Rev-C-ReSure-Sealant-Instructions-for-Use.pdf

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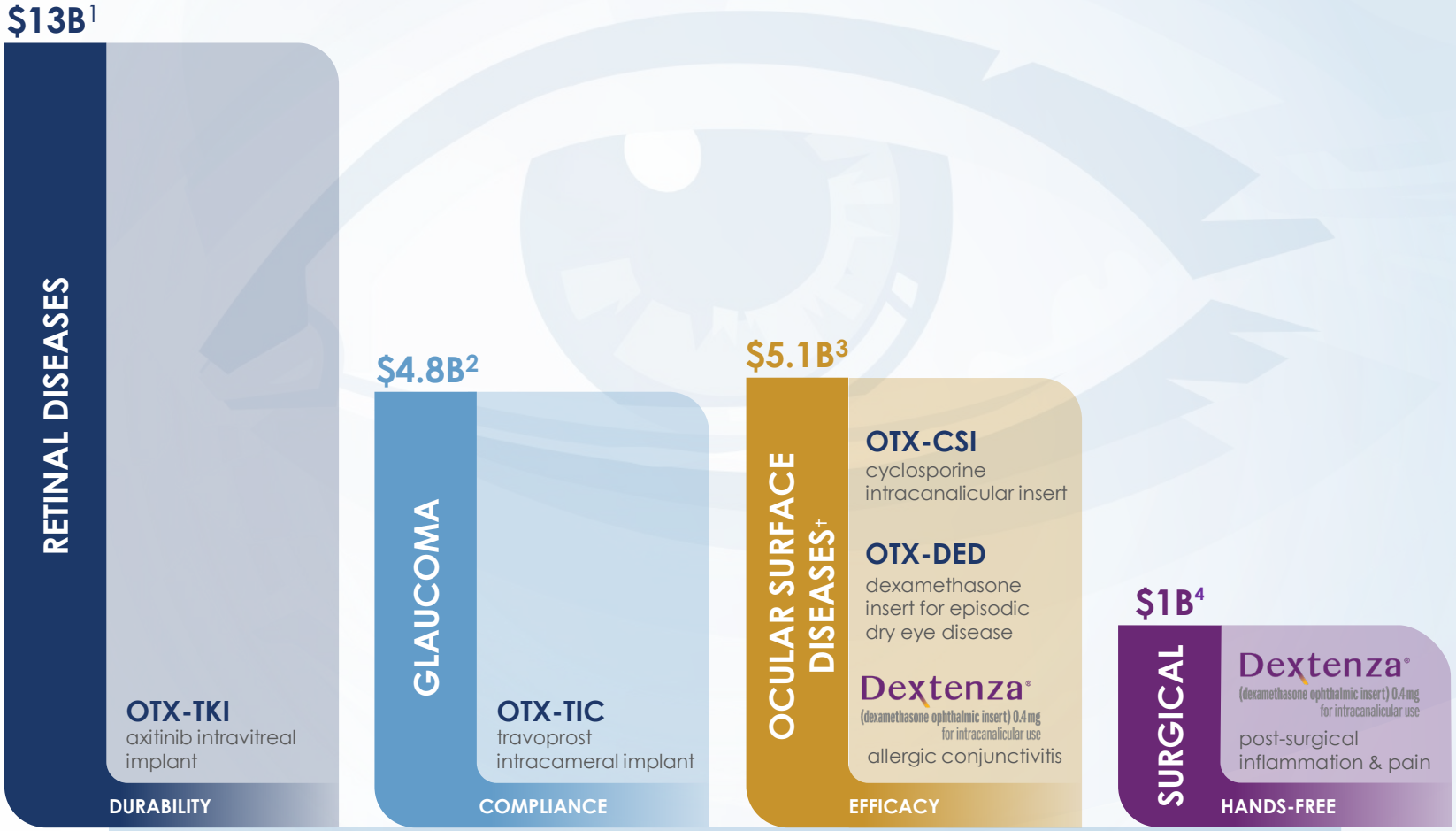
TOTAL GLOBAL MARKETS

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

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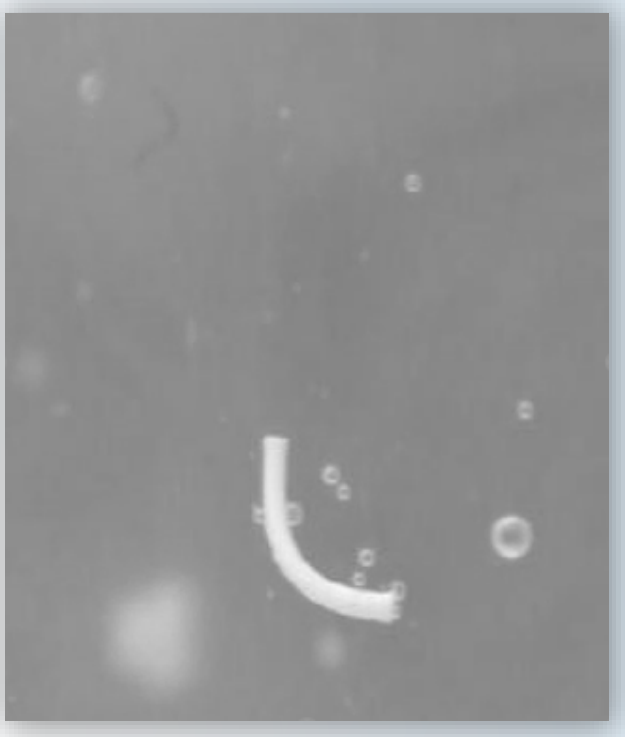
OTX-TKI (AXITINIB INTRAVITREAL IMPLANT)

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 injections[3]
- Cause discomfort, eye pain, decreased vision, increased photosensitivity, and floaters[3]



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.

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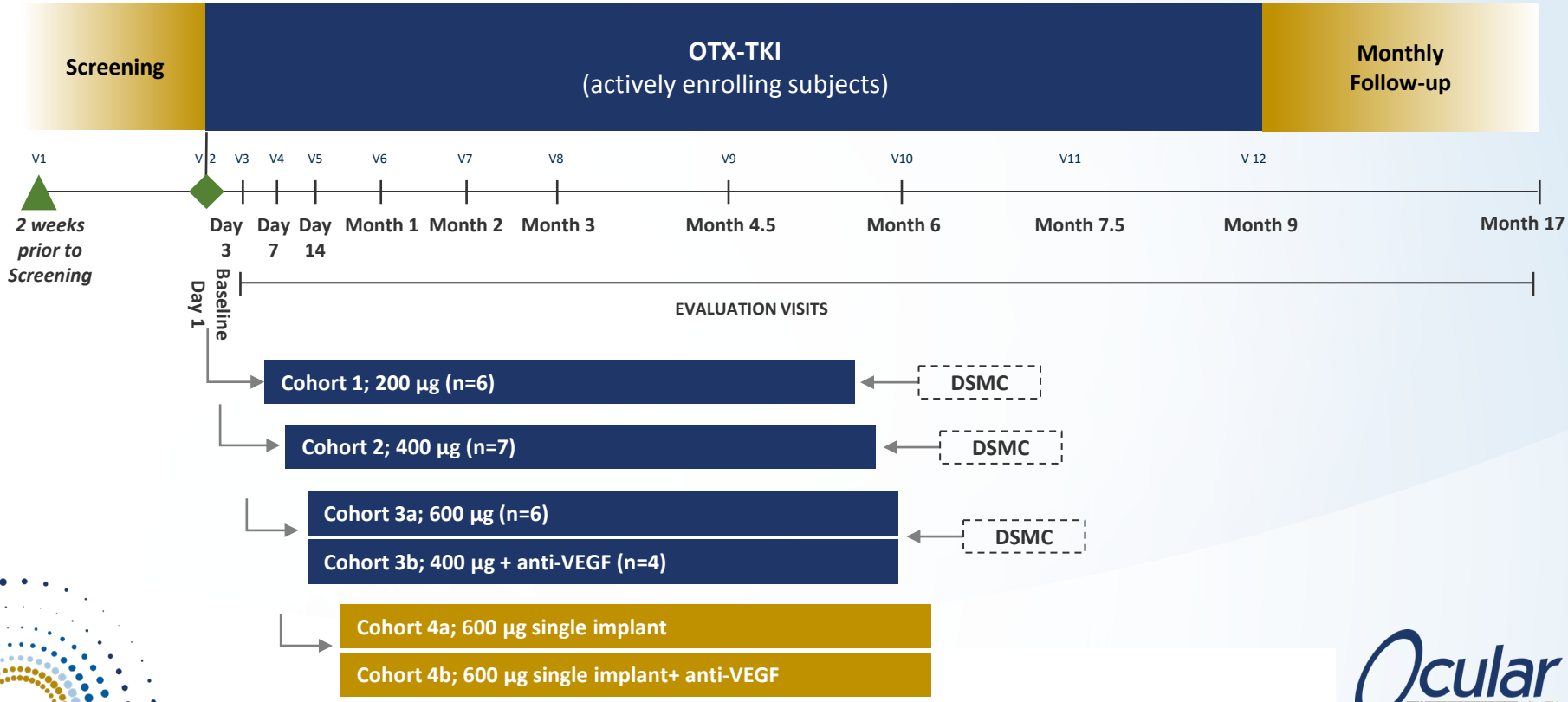
AUS-BASED OTX-TKI PHASE 1 STUDY

DESIGN

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

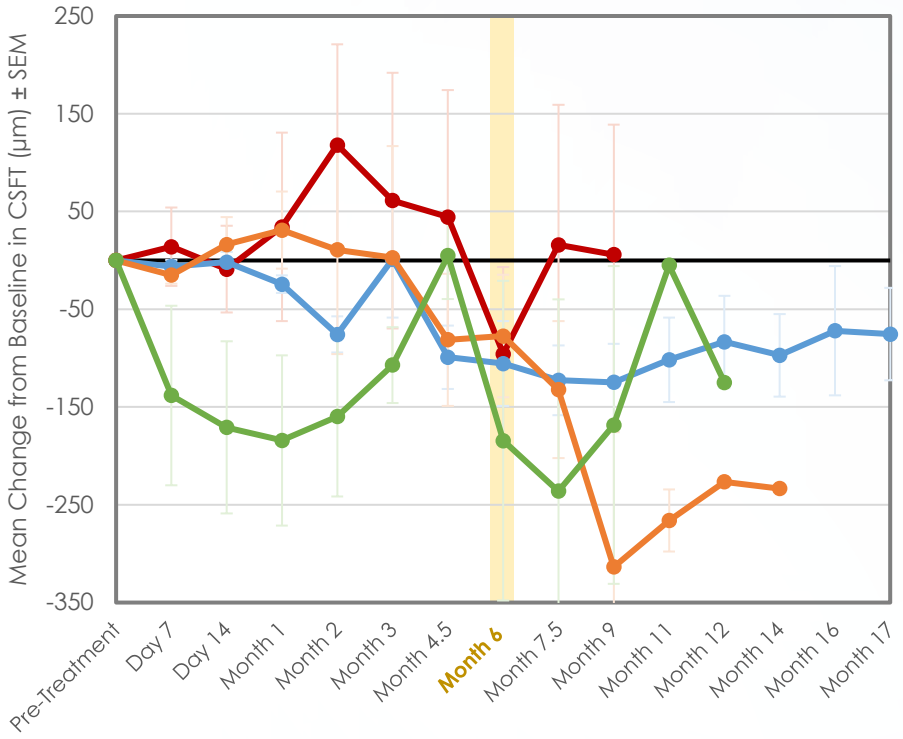
OBJECTIVES

- 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



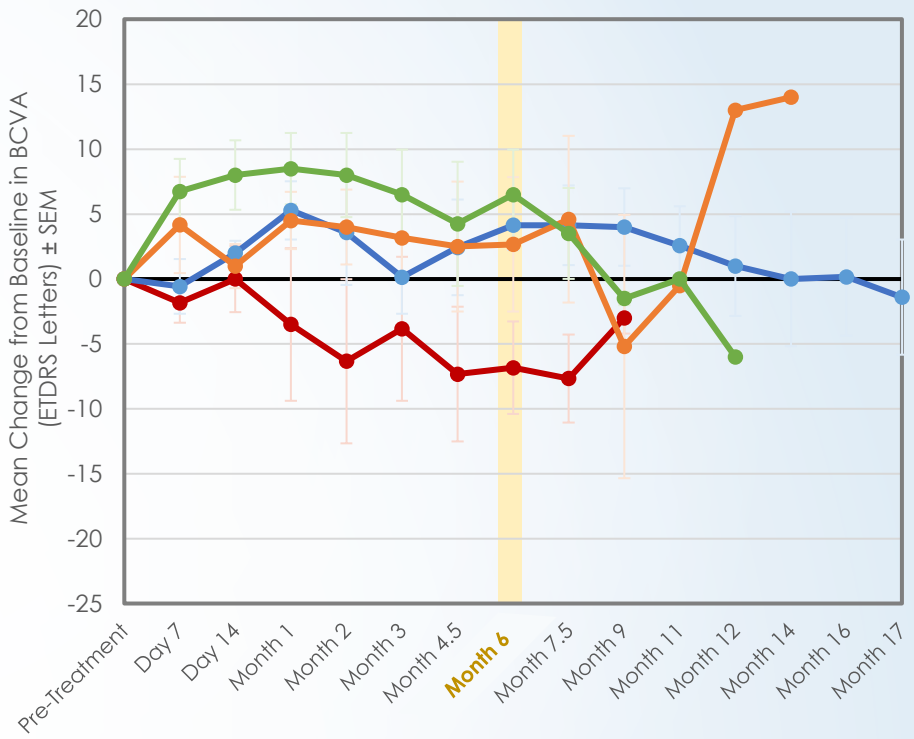
ALL COHORTS: MEAN CHANGE IN CSFT AND BCVA

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=4; Baseline: 435 ± 58 µm]

CHANGE FROM BASELINE IN BCVA



Cohort 1 (200 µg) [n=7; Baseline: 48 ± 12.0]
Cohort 2 (400 µg) [n=7; Baseline: 62 ± 8.5]
Cohort 3a (600 µg) [n=6; Baseline: 46 ± 6.4]
Cohort 3b (400 µg + Anti-VEGF) [n=4; Baseline: 47 ± 11.8]

Cohort 1: n=6 until Month 9; Cohort 2: n=7 until Month 12, n=6 for Month 14 and 16, n=4 for Month 17
Cohort 3a: n=6 until Month 7.5, n=3 for Month 9, n=2 for Month 11, n=1 for Month 12 and 14; Cohort 3b: n=4 until Month 4.5; n=2 for Month 6, 7.5 and 9, n=1 for Month 11 and 12

All BCVA and CSFT values compared to baseline visit; NOTE: Interim review, unmonitored data; Data cut off October 15, 2021

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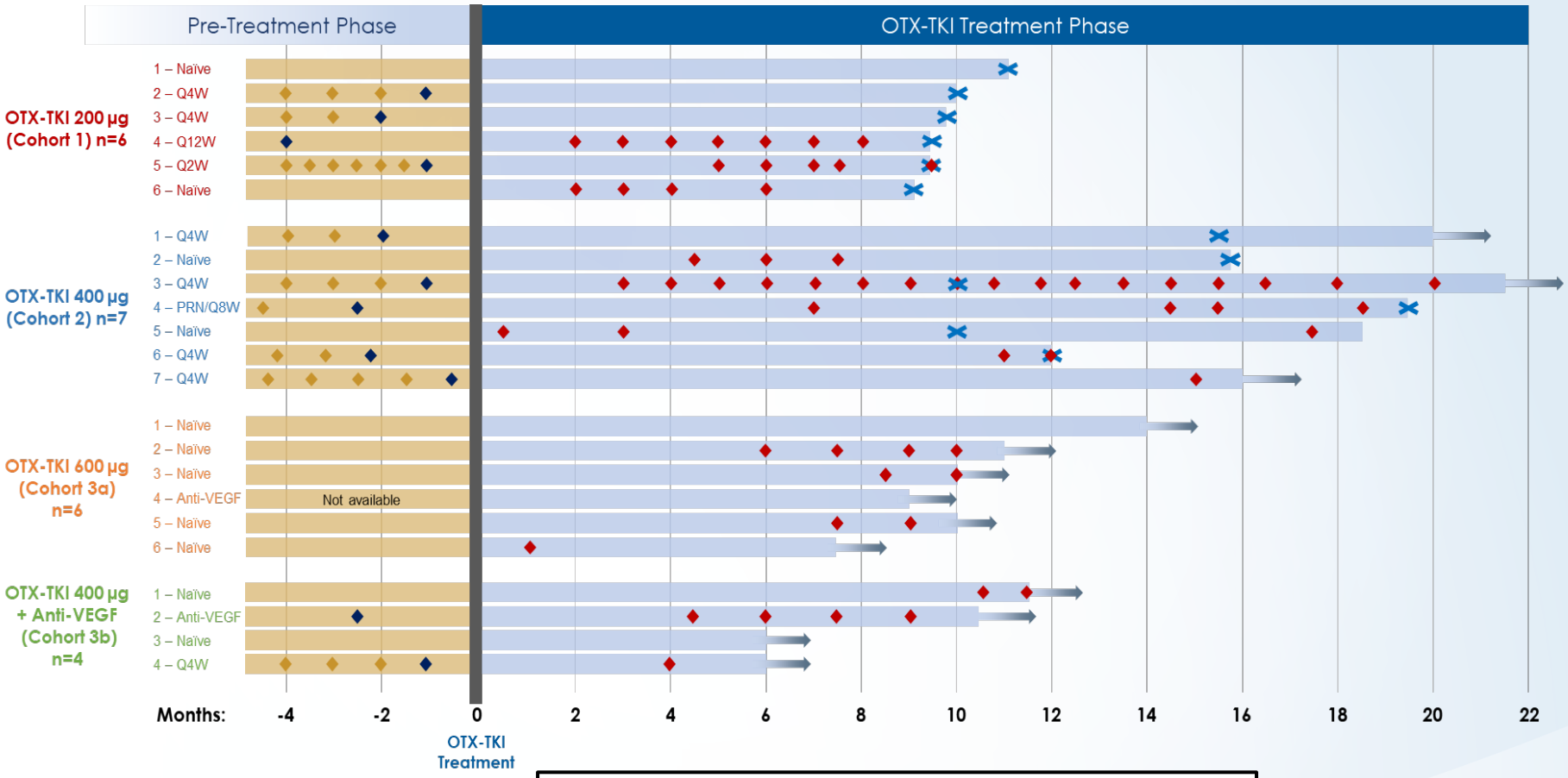
DURABILITY ASSESSMENT



Each bar represents a single subject (total n=23)
NOTE: Interim review, unmonitored data; Data cut off October 15, 2021

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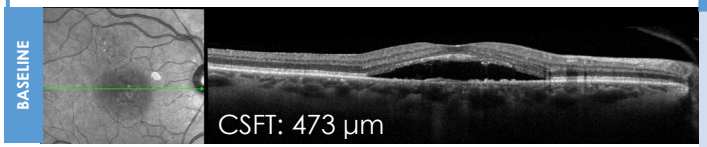
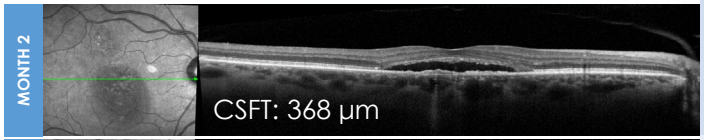
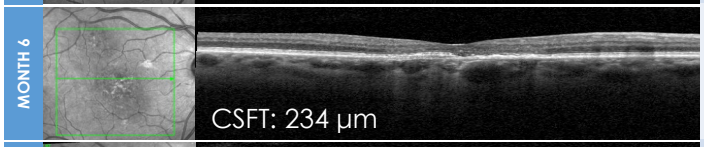
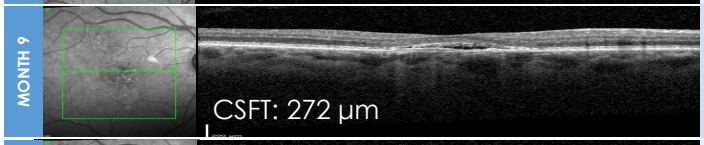
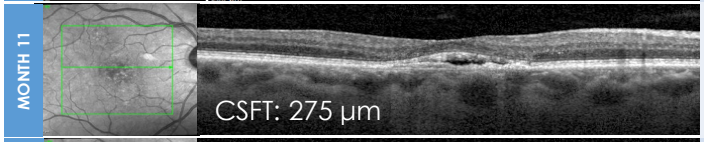
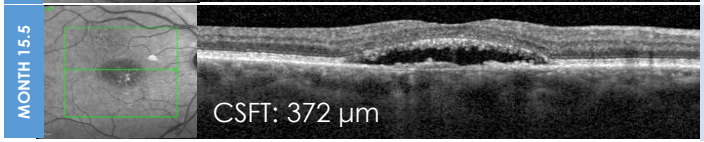
OTX-TKI PHASE 1
SD-OCT EVALUATION: COHORT 3

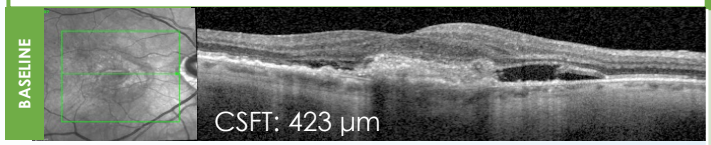
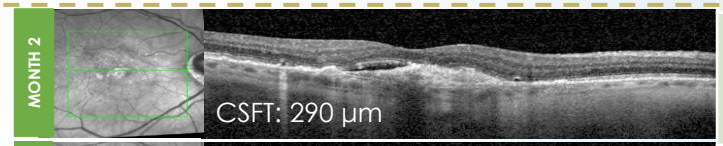
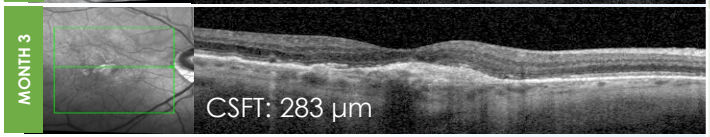
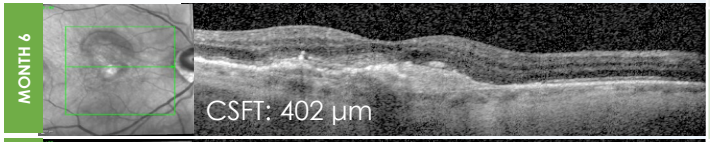
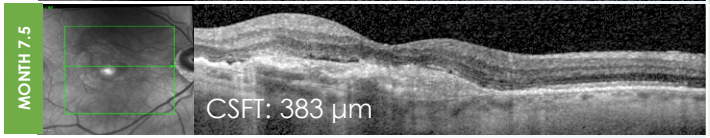
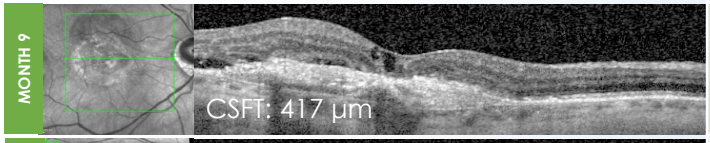
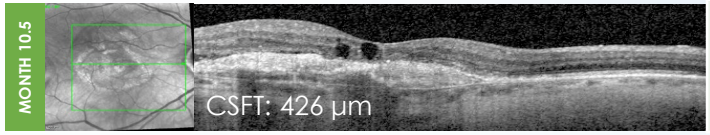
Cohort 3a (600µg) Subject 1 (OS): Treatment Naïve Subject		BCVA
BASELINE	CSFT: 484 µm	56 (20/80)
MONTH 2	CSFT: 236 µm	74 (20/30)
MONTH 3	CSFT: 232 µm	73 (20/40)
MONTH 6	CSFT: 239 µm	80 (20/25)
MONTH 9	CSFT: 244 µm	81 (20/25)
MONTH 11	CSFT: 249 µm	76 (20/30)
MONTH 14	CSFT: 250 µm	70 (20/40)

Cohort 3a (600µg): Subject 6 (OD): Treatment Naïve Subject		BCVA
BASELINE	CSFT: 466 µm	28 (20/320)
DAY 7	CSFT: 429 µm	30 (20/250)
MONTH 1	CSFT: 439 µm	28 (20/320) Received anti-VEGF at Month 1
MONTH 2	CSFT: 247 µm	30 (20/252)
MONTH 3	CSFT: 224 µm	31 (20/250)
MONTH 4.5	CSFT: 233 µm	30 (20/250)
MONTH 6	CSFT: 265 µm	27 (20/320)
MONTH 7.5	CSFT: 271 µm	40 (20/160)

NOTE: Interim review, unmonitored data; Data cut off October 15, 2021

OTX-TKI PHASE 1
SD-OCT EVALUATION: COHORT 2 AND 3

Cohort 2 (400µg): Subject 1 (OD): History of Aflibercept Q4 Weeks for 16 months	BCVA
	87 (20/18)
	88 (20/17)
	89 (20/17)
	88 (20/17)
	84 (20/21)
	90 (20/16)

Cohort 3b (400µg + Anti-VEGF): Subject 1 (OD): Treatment Naïve Subject	BCVA
	39 (20/160)
	54 (20/80)
	52 (20/100)
	52 (20/100)
	46 (20/125)
	38 (20/200)
	35 (20/200)

Received anti-VEGF at Month 10.5

NOTE: Interim review, unmonitored data; Data cut off October 15, 2021.

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PHASE I RESULTS DEMONSTRATING DURATION OF EFFECT

OVER 50% OF SUBJECTS WITH FLUID AT BASELINE DID NOT RECEIVE ANTI-VEGF THERAPY OUT TO 6 MONTHS

	Percentage of Subjects Without Needing Anti-VEGF Injections					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)	**28.6** (2/7)	**25** (1/4)*
Cohort 3a (600 µg)*	**83.3** (5/6)	**83.3** (5/6)	**66.6** (4/6)	**66.6** (4/6)	**40** (2/5)*	**100** (1/1)*	**100** (1/1)*	TBD
Cohort 3b (400 µg + anti-VEGF)*	**100** (4/4)	**100** (4/4)	**50** (2/4)	**50** (1/2)*	**50** (1/2)*	TBD	TBD	TBD
TOTAL	**91.3** (21/23)	**78.3** (18/23)	**56.5** (13/23)	52.4 (11/21)*	**45** (9/20)*	**37.5** (3/8)*	**37.5** (3/8)*	**25** (1/4)*

*Follow-up ongoing;
NOTE: Interim review, unmonitored data; Data cut off October 15, 2021

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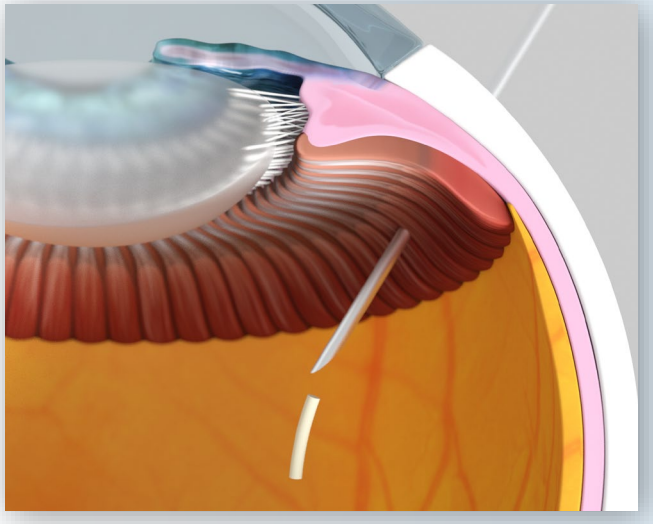
AUS-BASED OTX-TKI PHASE 1 STUDY CONCLUSIONS TO DATE

- **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 Cohort 1, 2, 3a and 3b
- **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 as early as a week after treatment in two subjects
- **Therapy durability suggests extended duration of action**
  - Over 50% of subjects demonstrated durability of 6 months or longer
- **Consistent bio-resorption observed**
  - Implant biodegraded in subjects in Cohort 1 by 9-10.5 months
- **Implant location observation suggests limited movement**
  - Implant was able to be adequately monitored



NOTE: Interim review, unmonitored data; Data cut on April 12th, 2021; Results not reviewed or approved by FDA

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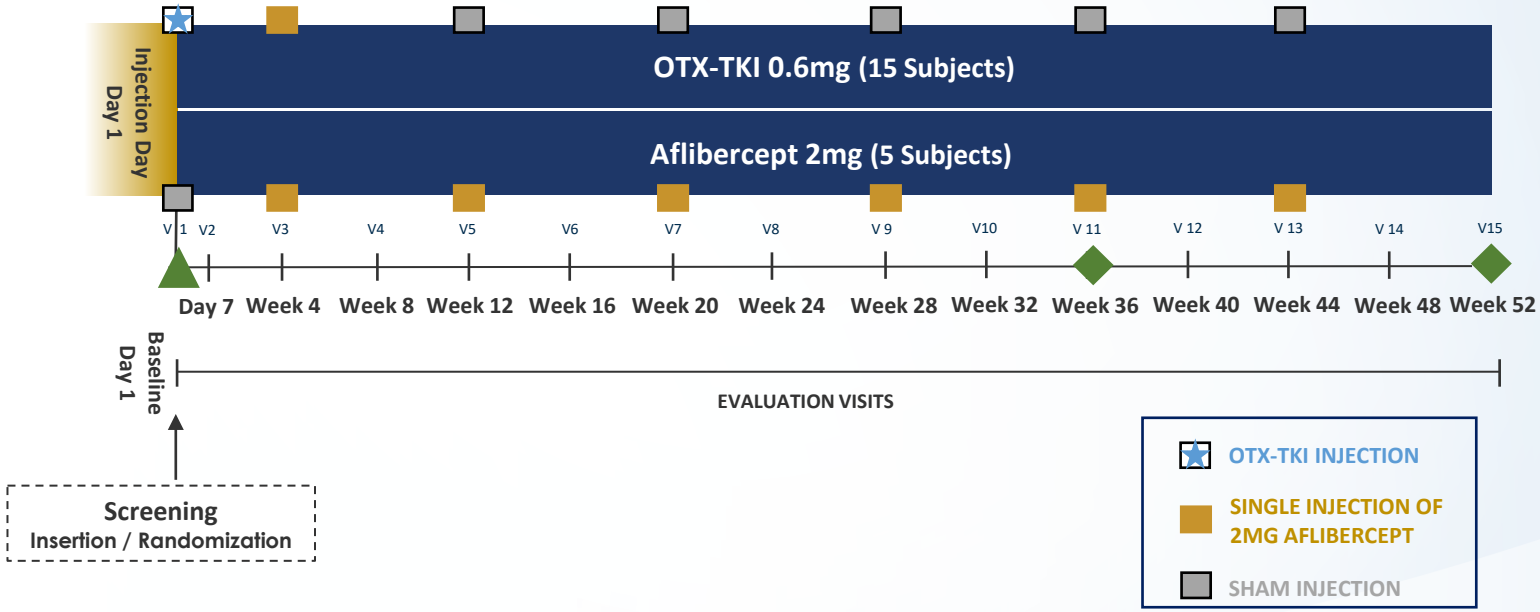
OTX-TKI PHASE 1 US STUDY

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

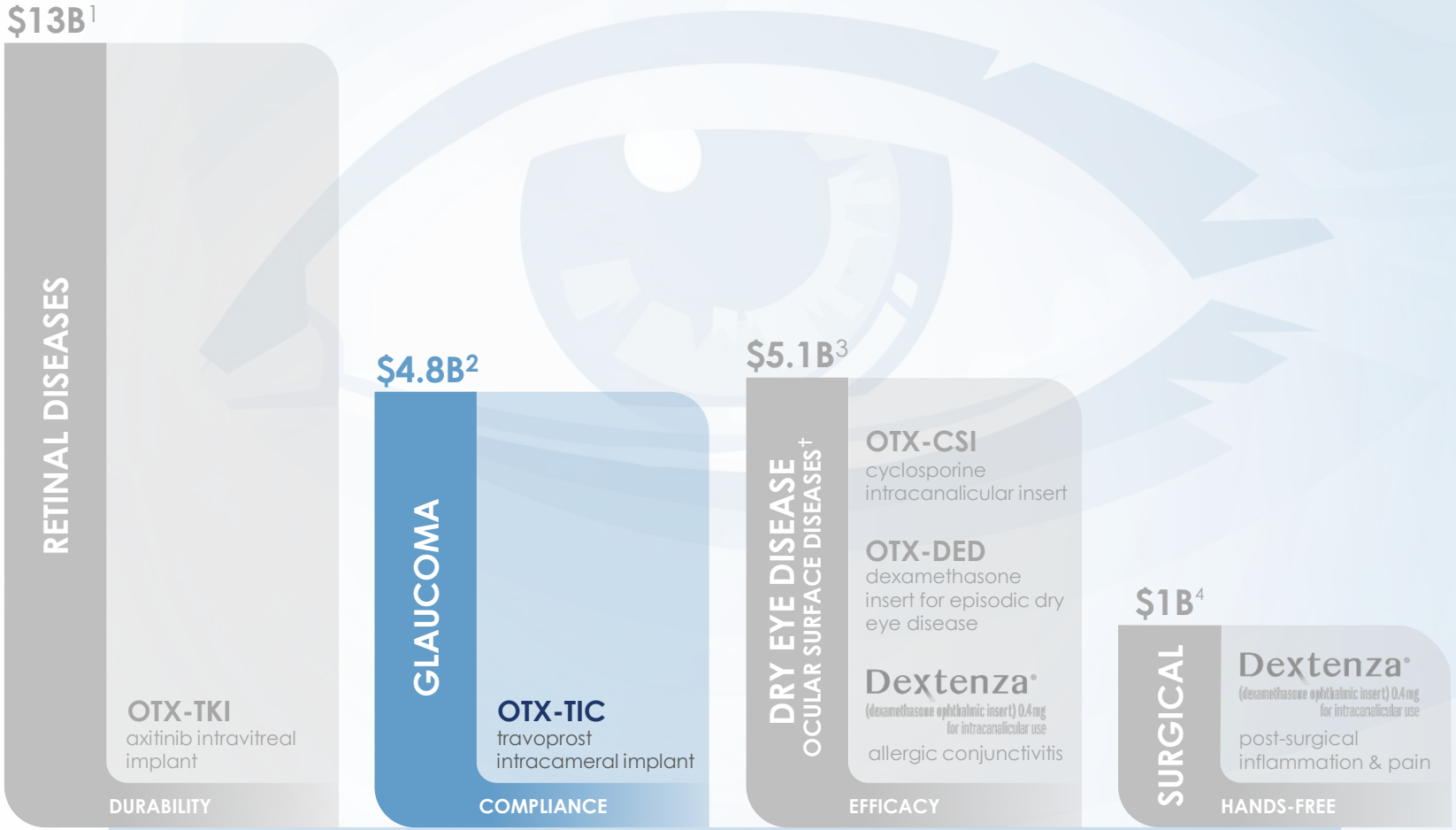
- Safety, tolerability, durability and biological activity
- BCVA, mean change in central subfield thickness (CSFT) measured by SD-OCT and safety evaluations at all visits



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



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OTX-TIC (TRAVOPROST INTRACAMERAL IMPLANT)

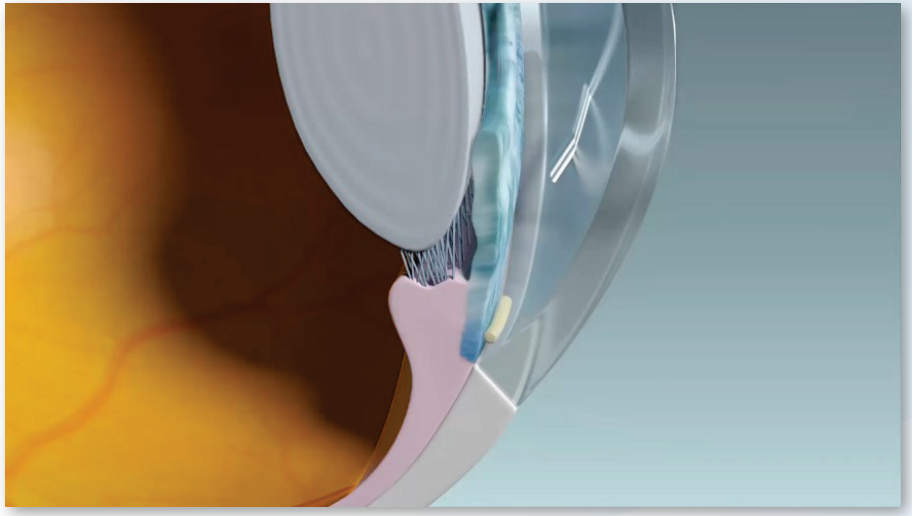
ADDRESSES THE ISSUE OF PATIENT NON-COMPLIANCE WITH EYE DROPS

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.

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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

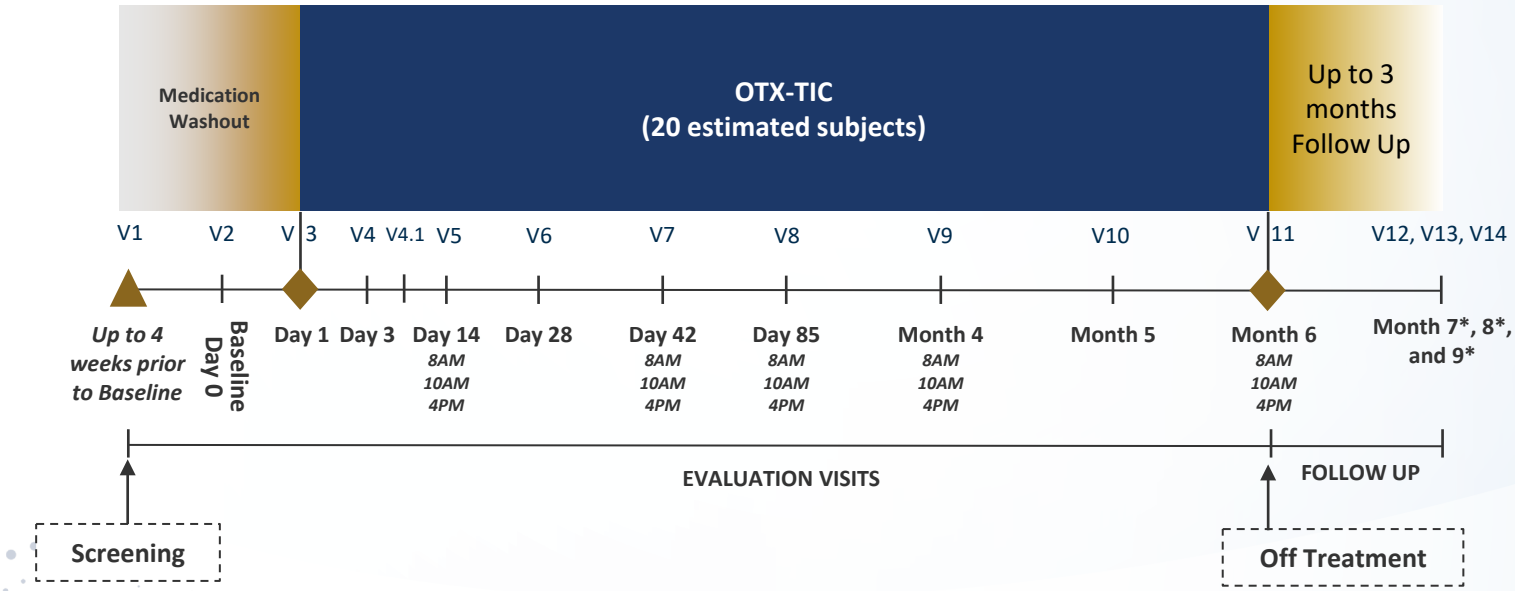
Objectives

- 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

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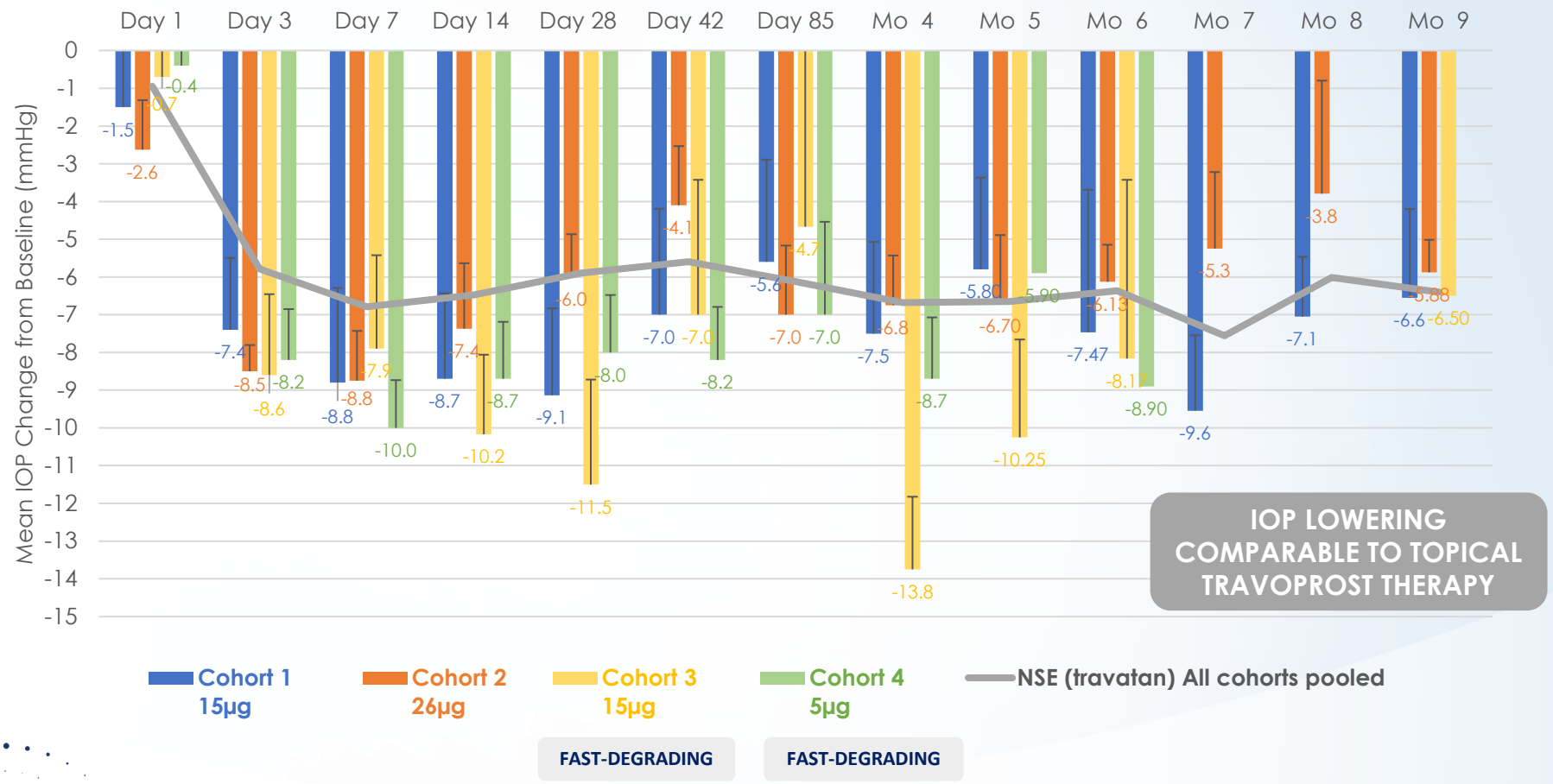
ALL COHORTS: MEAN IOP CHANGE FROM BASELINE

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



Subjects who received rescue therapy (ie, IOP lowering medication other than OTX-TIC) were excluded from analysis
NB: Unmonitored data (8AM measurements)

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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)

100% **75-99%** **50-74%** **<50%**

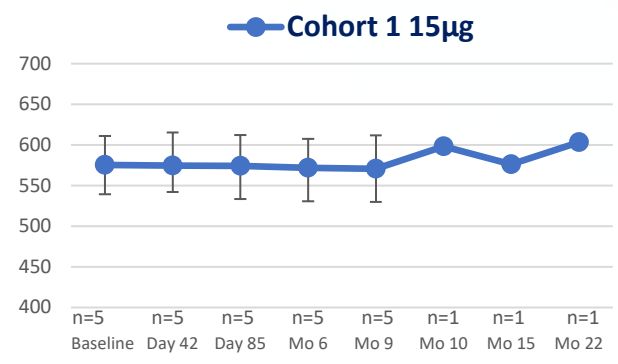
NB: Unmonitored data (8AM measurements)

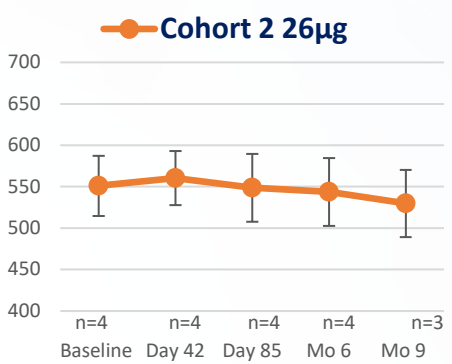
Ocular Therapeutix™

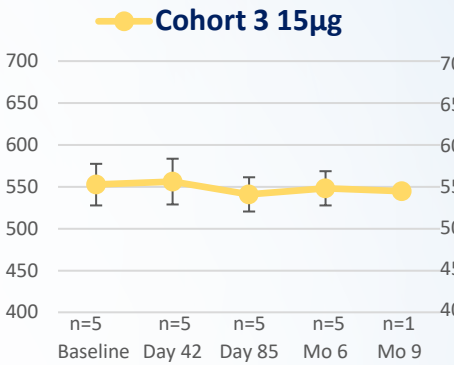
ALL COHORTS: NO EFFECT OBSERVED ON CORNEAL HEALTH

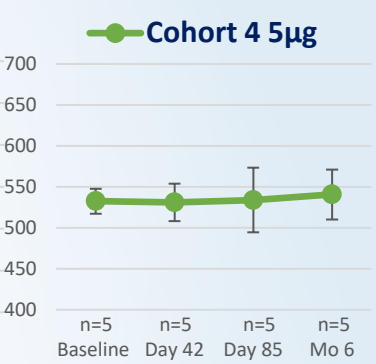
PACHYMETRY & ENDOTHELIAL CELL COUNTS INDICATE NO CLINICALLY-MEANINGFUL CHANGE FROM BASELINE

PACHYMETRY (µm)

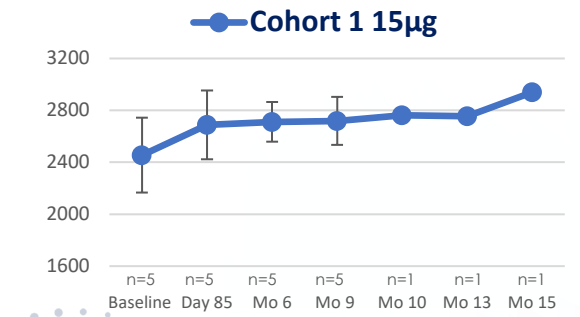


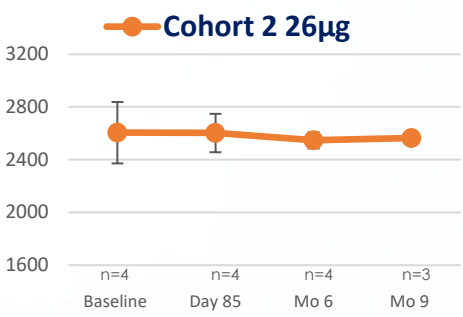


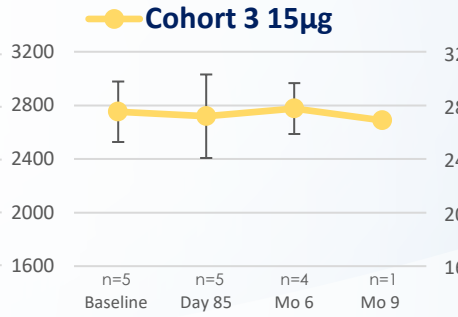


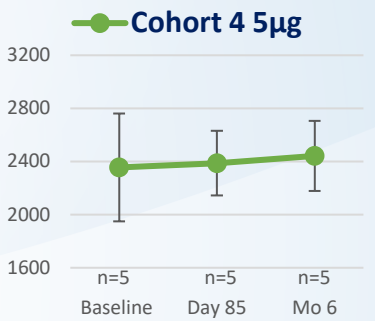


ENDOTHELIAL CELL COUNTS (AUTOMATED)









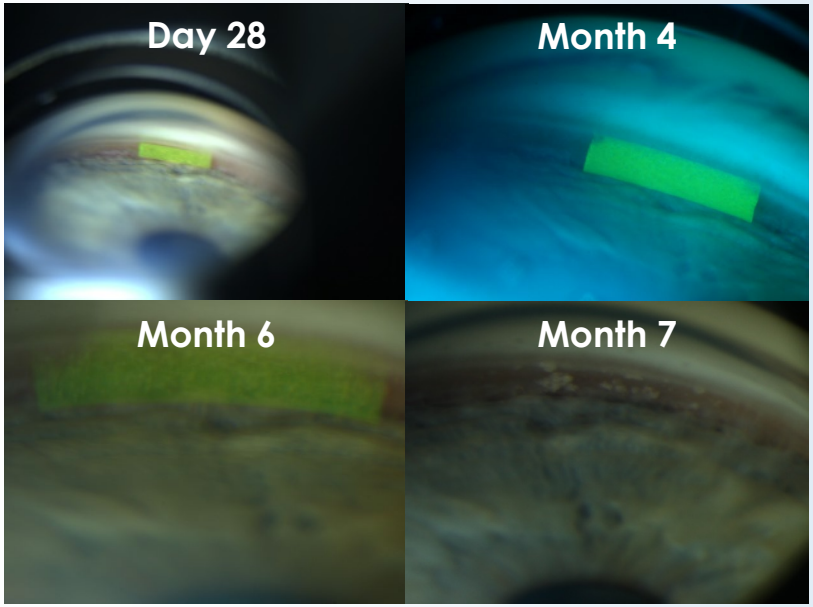
NB: Unmonitored data

Ocular Therapeutix™

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



NB: Unmonitored data; Results not reviewed or approved by FDA

Ocular Therapeutix™

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

DESIGN

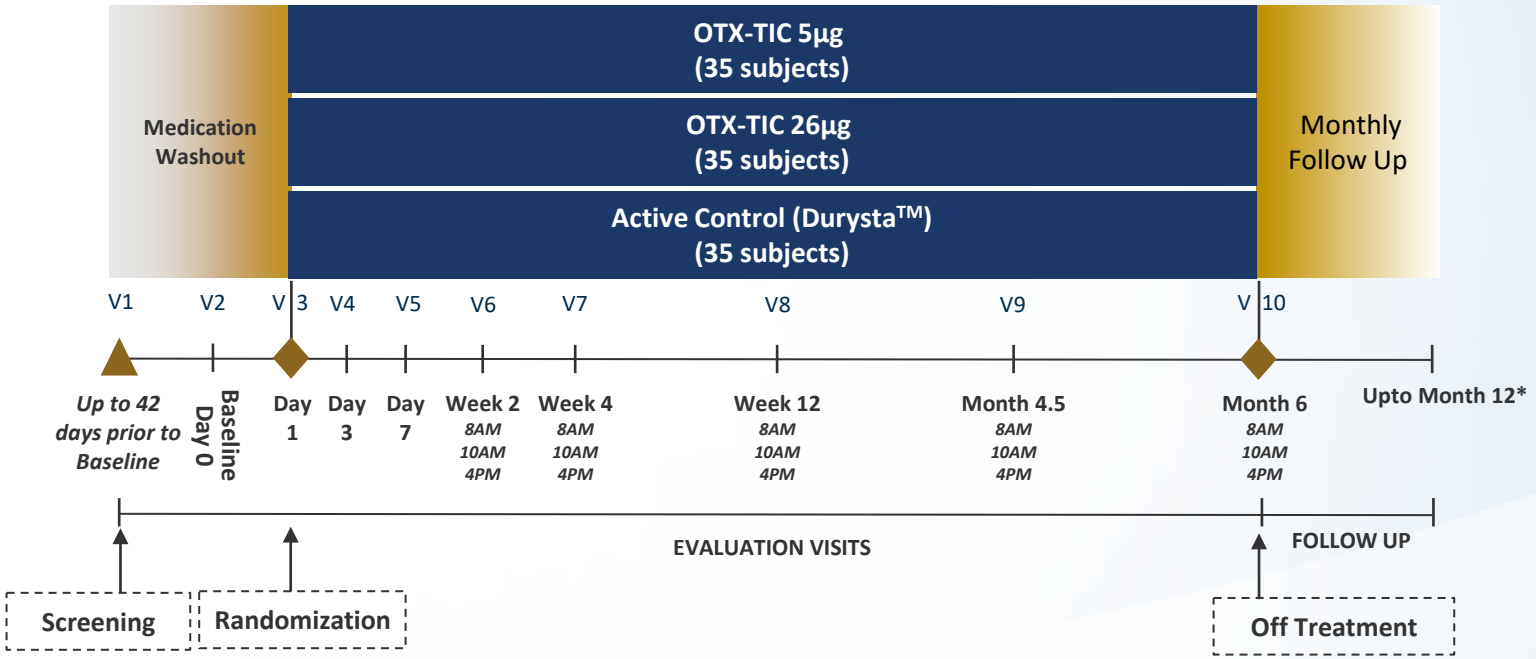
- Prospective, multi-center, randomized, parallel-group, controlled study
- Approximately 105 subjects at 15-20 US sites
- 35 subjects per arm, 3 arms; Randomization 1:1:1
- Key Inclusion criteria:
  - Controlled ocular HTN or POAG
  - Open, normal anterior chamber angles on gonioscopy

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

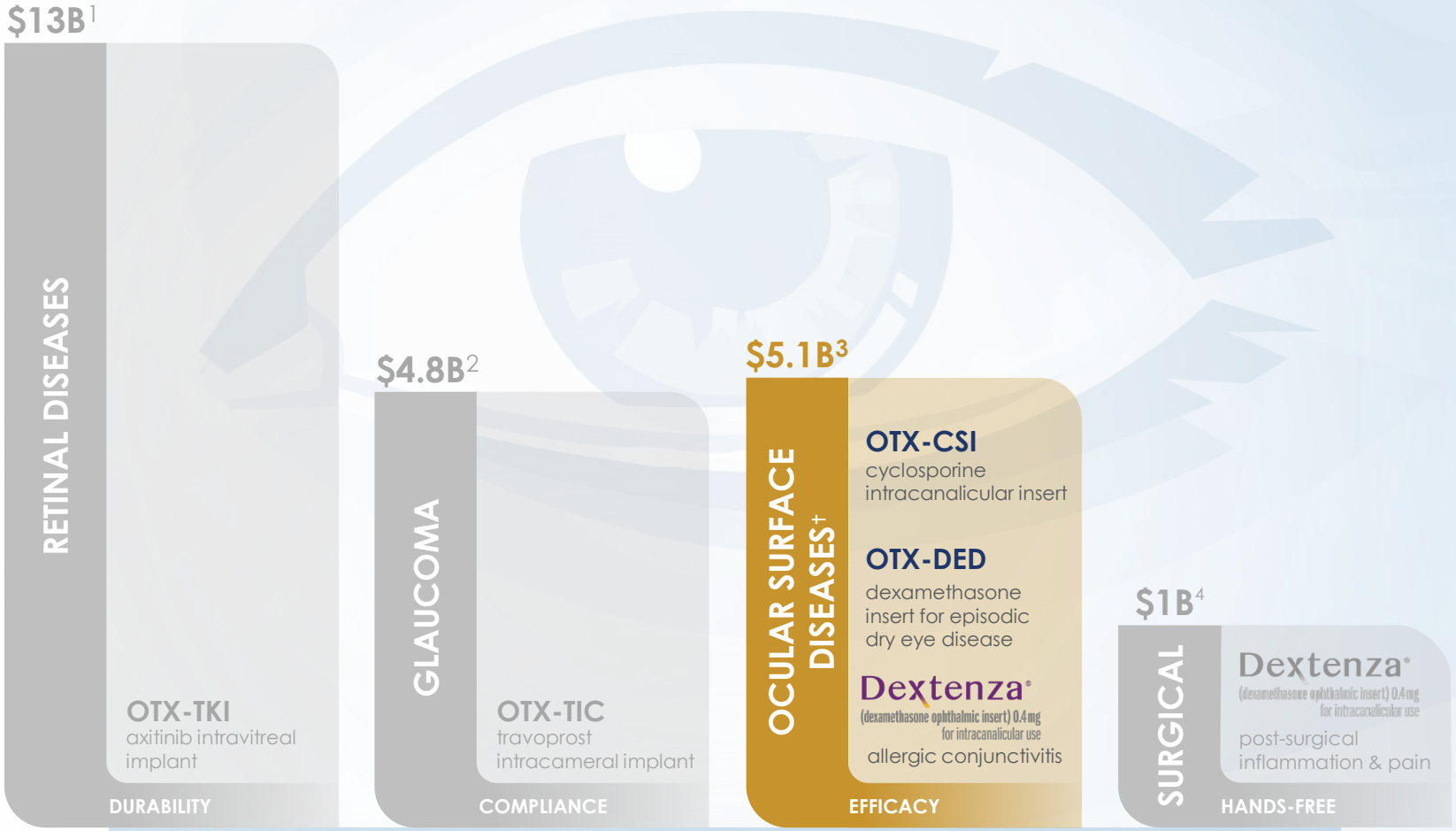


* Monthly visits until IOP is within 10% of baseline for up to 6 months, if needed

Ocular Therapeutix™

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.

* 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

Ocular Therapeutix™

INTRACANALICULAR INSERTS

AN INNOVATION IN DRUG DELIVERY TO THE OCULAR SURFACE

Ocular Therapeutix™

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

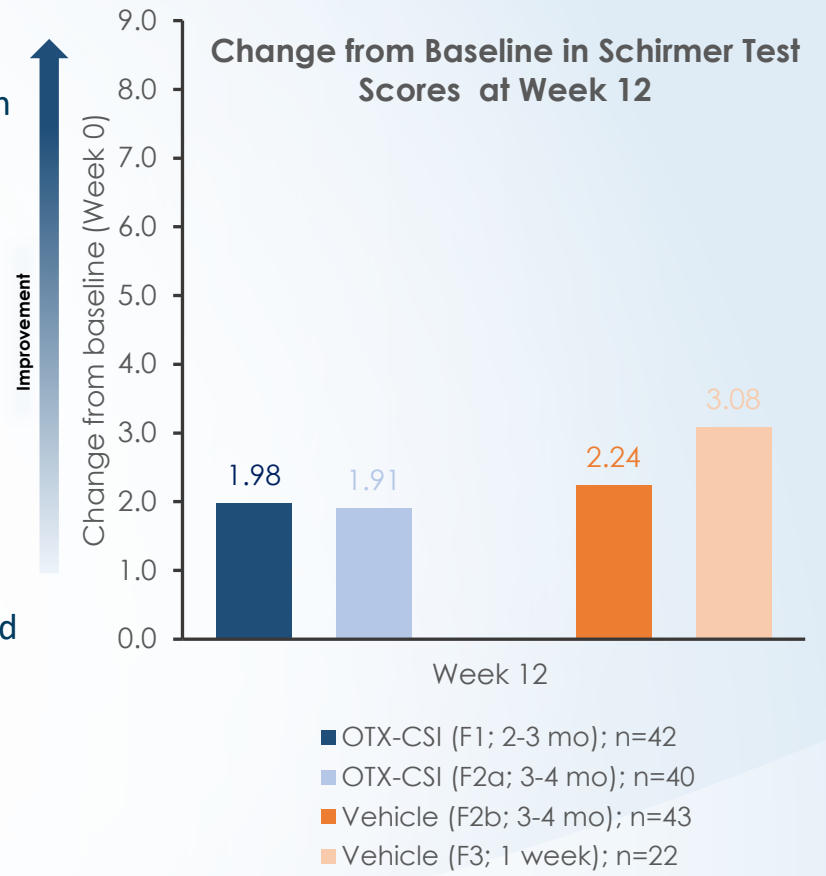
KEY PRODUCT ATTRIBUTES

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

PHASE 2 TRIAL TOPLINE RESULTS

- No separation of effect observed between active drug & control groups (both formulations) on the primary endpoint of increased tear production at 12 weeks as measured by Schirmer's Test
- Improvement from baseline observed in signs (tCFS)† and symptoms (EDS)† of dry eye disease, however, not statistically significant
- OTX-CSI (both formulations) was generally observed to have a favorable safety profile

PHASE 2 TRIAL TOPLINE RESULTS



Data review continues to inform future developments of this program

† tCFS: Total Corneal Fluorescein Staining; EDS: Eye Dryness Score capturing using Visual Analog Scale; Results not reviewed or approved by FDA

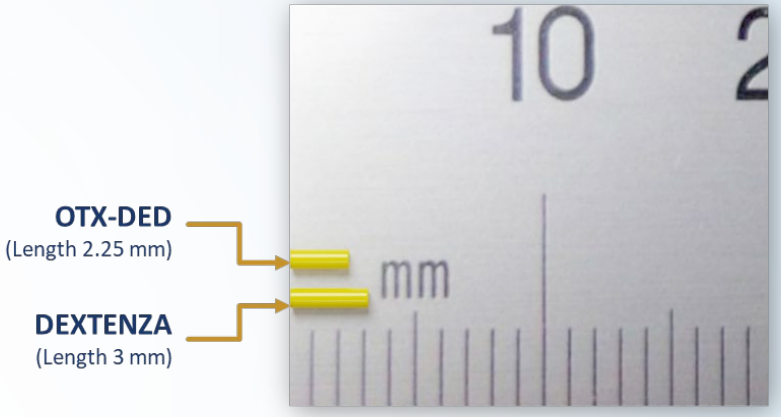
Ocular Therapeutix™

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
- All currently approved topical steroid eye drops in US have preservatives which have the potential to cause ocular surface toxicity



Rendering showing OTX-DED is shorter in length than DEXTENZA

KEY PRODUCT ATTRIBUTES

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

PHASE 2 STUDY OBJECTIVE AND DESIGN

Design

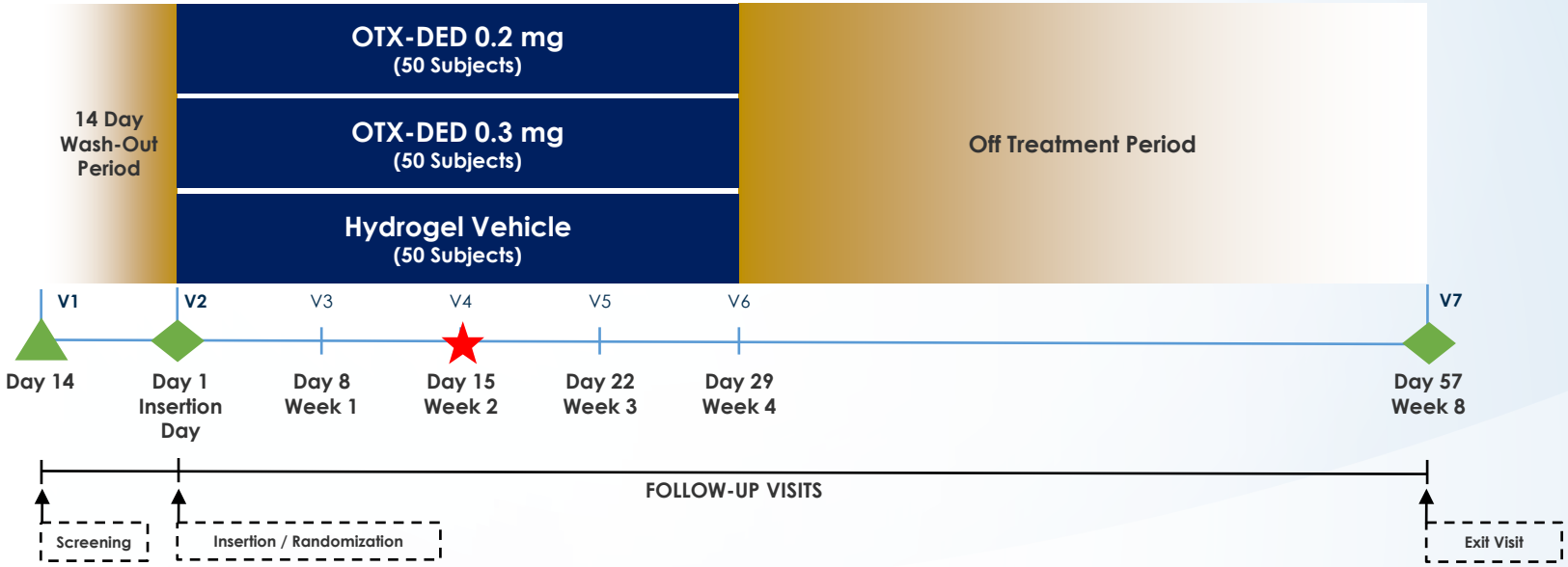
- Prospective, Randomized, Double-Masked, Vehicle-controlled study
- Key Inclusion criteria:
  - DED diagnosis in both eyes for ≥6 months
  - VAS eye dryness severity score ≥30
  - Bulbar conjunctival hyperemia grade ≥ 2 (CCLRU scale)

Obbjective:

Efficacy and Safety of OTX-DED for the Short-term Treatment of Signs and Symptoms of Dry Eye Disease

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)



Topline results expected Q1 2022

DEXTENZA FOR THE TREATMENT OF OCULAR ITCHING ASSOCIATED WITH ALLERGIC CONJUNCTIVITIS

FDA APPROVED ON OCT 7TH, 2021

OCULAR'S FIRST PRIMARILY OFFICE-BASED INDICATION

ISSUES WITH EXISTING TREATMENTS

- Eyedrop treatment requires frequent administration, and hands touching face several times/day[1]
- Corticosteroids:
  - ✓ effective in treating signs & symptoms of acute and chronic allergy[2,3]
  - ✓ not often prescribed due to the ability to abuse/overuse[1,4]

KEY PRODUCT ATTRIBUTES

- 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

- 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 dry eye disease, and administration of anti-histamines and preservatives can exacerbate DED
- Define office and physician archetypes, prioritizing those most likely to adopt

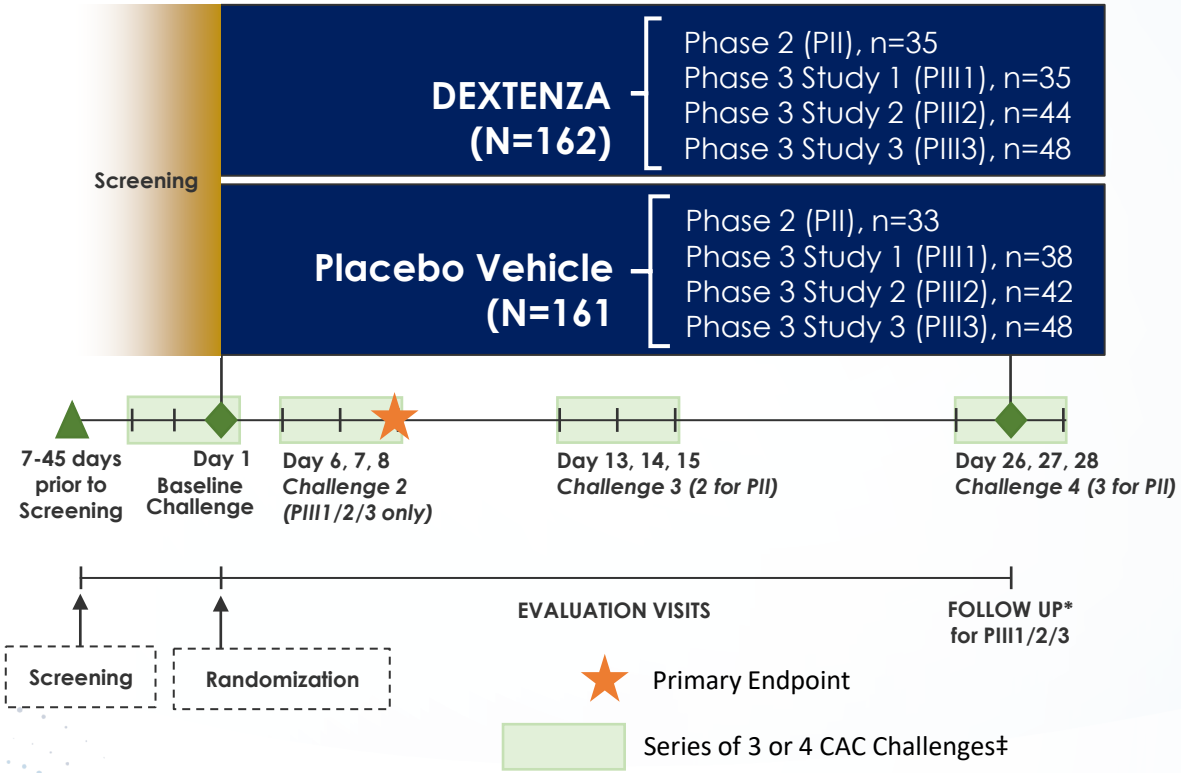
References: 1. Varu DM, et al. *Ophthalmology*. 2019;126(1):P94-P169. **2.** ALREX [package insert]. Tampa, FL: Bausch & Lomb; 2019. **3.** Leonardi A. *Curr Allergy Asthma Rep*. 2002;2(4):325-331. **4.** Phulke S, et al. *J Curr Glaucoma Pract*. 2017;11(2):67-72; Full prescribing information can be found at https://www.dextenza.com/wp-content/uploads/DEXTENZA-Full-Prescribing-Information.pdf

Ocular Therapeutix™

DEXTENZA FOR ALLERGIC CONJUNCTIVITIS

PHASE 3 CLINICAL TRIALS DESIGN

- One Phase 2 and three Phase 3 clinical trials conducted using a modified Ora-CAC® (Conjunctival Allergen Challenge) Model
- Randomized, double-masked, vehicle-controlled studies in allergic conjunctivitis subjects
- Efficacy analysis included three Phase 3 studies and safety analysis included Phase 2 and three Phase 3 studies (four studies)



Key Inclusion Criteria

- History of allergic conjunctivitis
- Positive skin test to seasonal and/or perennial allergens
- Bilateral CAC reaction

Key Endpoints

- Ocular Itching 3, 5 and 7 minutes post-CAC on Day 8
- Conjunctival redness 7, 15 and 20 minutes post-CAC on Day 8†

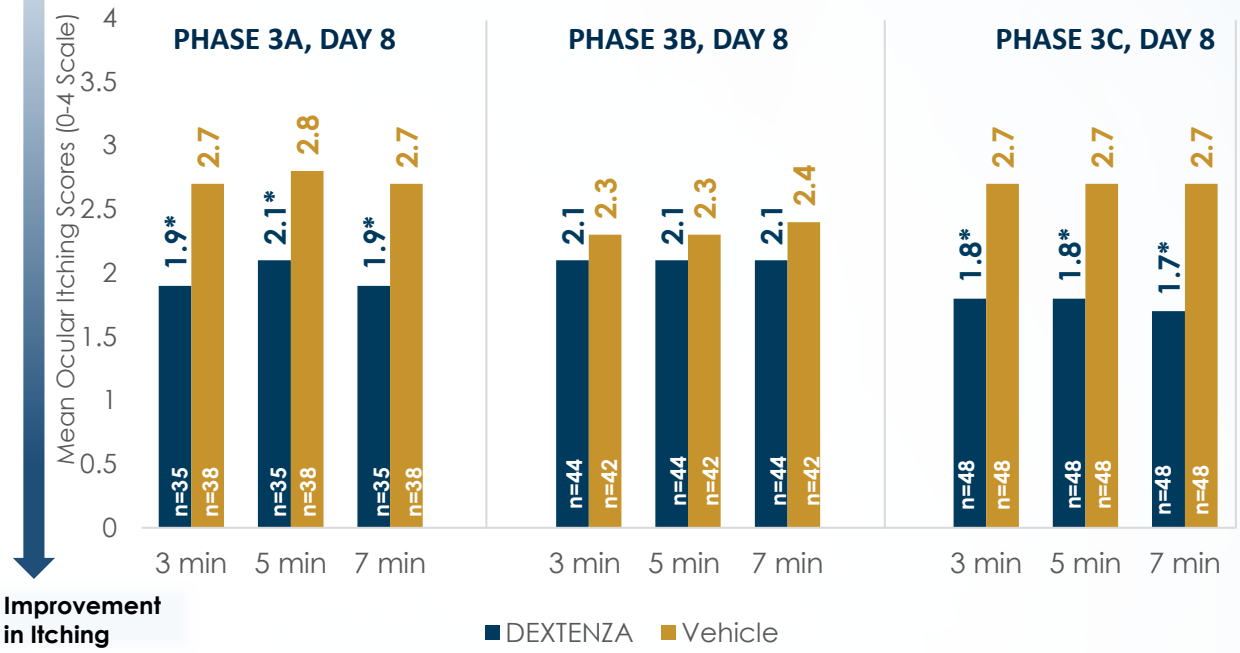
†Only Study 3 demonstrated significant differences in conjunctival redness scores in favor of DEXTENZA on Day 8 (P<0.05)

*Phase II study only also had Day 40, 41, 42 where Challenge 4 was induced at additional follow-up visits
‡Phase 2 + two Phase 3 studies (study 1 and study 2) had 4 challenges and Phase 3 Study 3 only had series of 3 challenges

DEXTENZA FOR ALLERGIC CONJUNCTIVITIS

CLINICAL TRIAL RESULTS OVERVIEW

PRIMARY EFFICACY ENDPOINT
MEAN OCULAR ITCHING SCORES ACROSS ALL PHASE 3 STUDIES



DEXTENZA achieved statistically significant lower mean ocular itch scores compared to vehicle in two of three Phase 3 studies

MOST COMMON ADVERSE EVENTS (AEs) REPORTED IN THE DEXTENZA GROUP IN ONE PHASE 2 AND THREE PHASE 3 STUDIES

Adverse Event	DEXTENZA N=154 n (%)	Vehicle N=161 n (%)
Increased intraocular pressure	5 (3.2)	0
Reduced visual acuity	2 (1.3)	0
Increased lacrimation	2 (1.3)	6 (3.7)
Eye discharge	2 (1.3)	4 (2.5)

- No severe AEs were reported; all were mild or moderate in severity
- No ocular serious AEs were reported
- No dacryocanaliculitis AEs reported in the DEXTENZA group

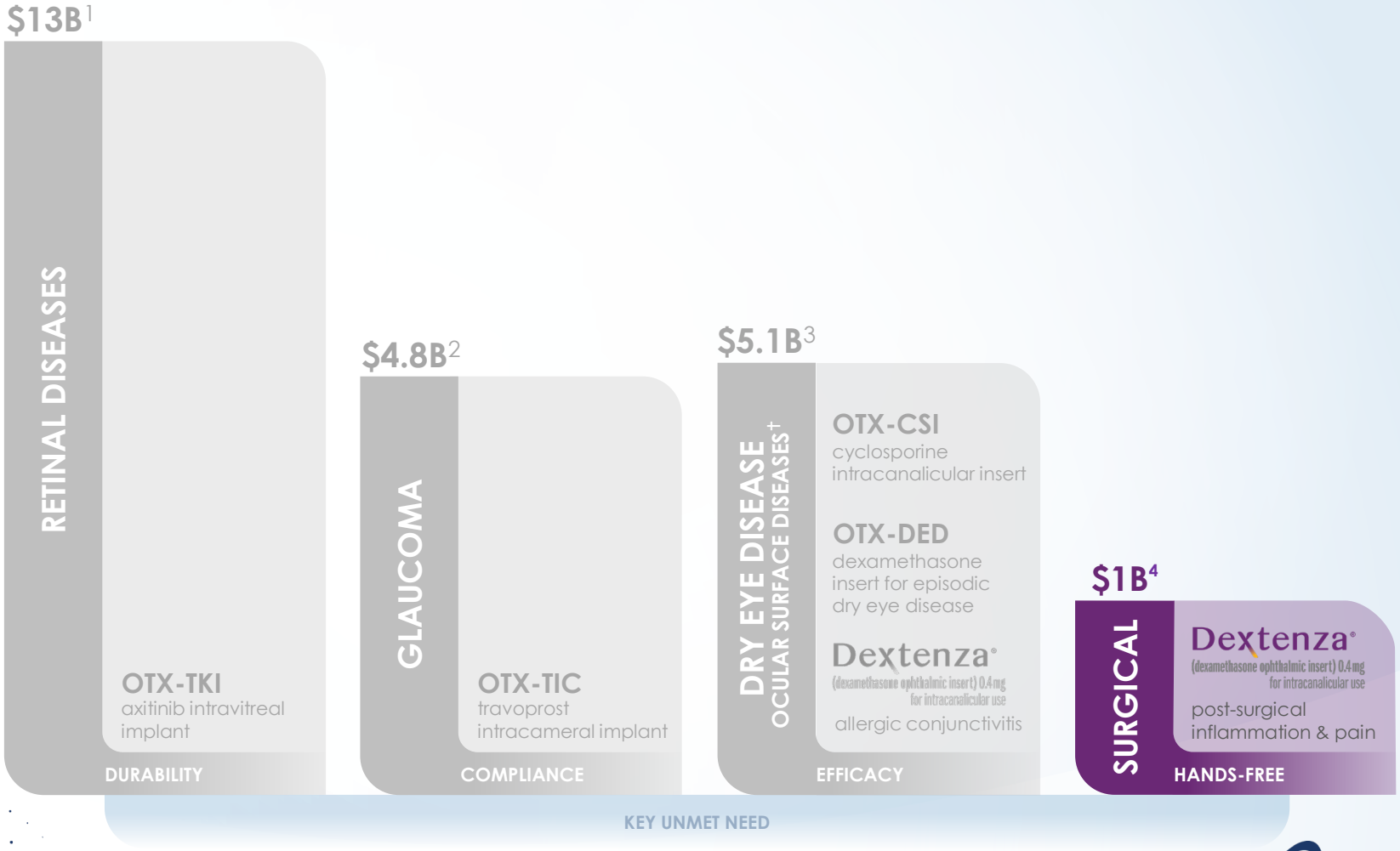
*Statistically Significant *p<0.05*

DEXTENZA [package insert]. Bedford, MA: Ocular Therapeutix Inc; 2021; Full prescribing information can be found at https://www.dextenza.com/wp-content/uploads/DEXTENZA-Full-Prescribing-Information.pdf

Ocular Therapeutix™

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



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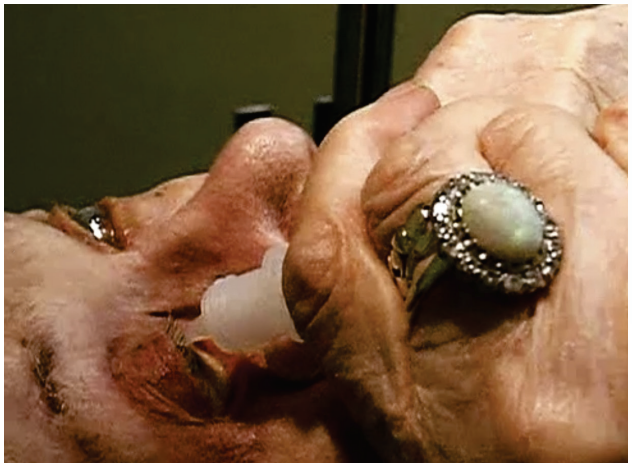
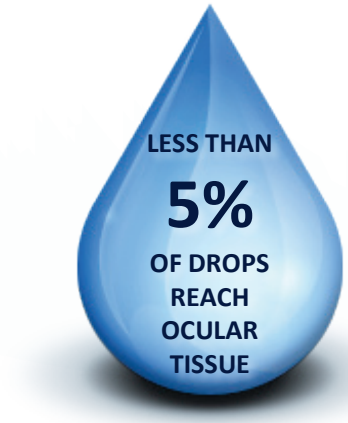
Ocular Therapeutix™

THE UNMET NEED IN TREATMENT OF PAIN AND INFLAMMATION FOLLOWING SURGERY

EYE DROPS HAVE POOR CORNEAL RESIDENCE TIME[3,4]

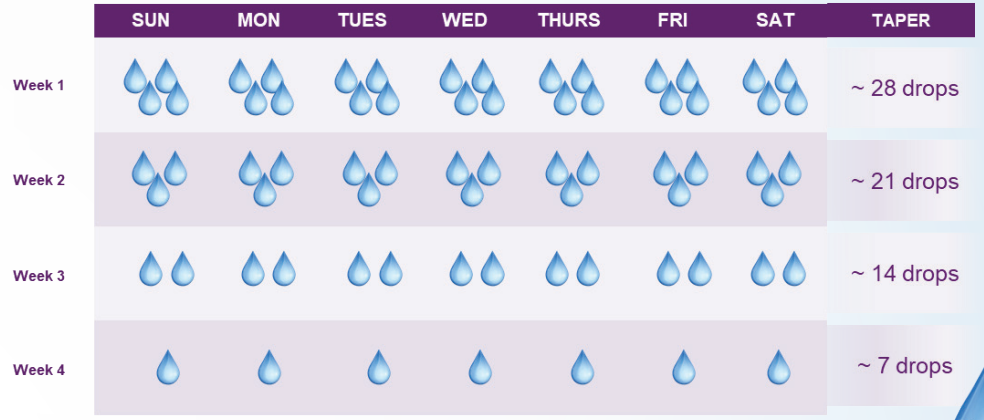


Video Courtesy Dr. Alan Robin



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

Common clinical approach: 4 weeks with taper[1]



Ocular rebound inflammation may develop secondary to rapid tapering or abrupt discontinuation of steroids[3]

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.

Ocular Therapeutix™

DEXTENZA® (DEXAMETHASONE OPHTHALMIC INSERT)

A HANDS-FREE ALTERNATIVE TO EYE DROPS

FDA approved for the treatment of ocular inflammation and pain following ophthalmic surgery and ocular itching associated with allergic conjunctivitis

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

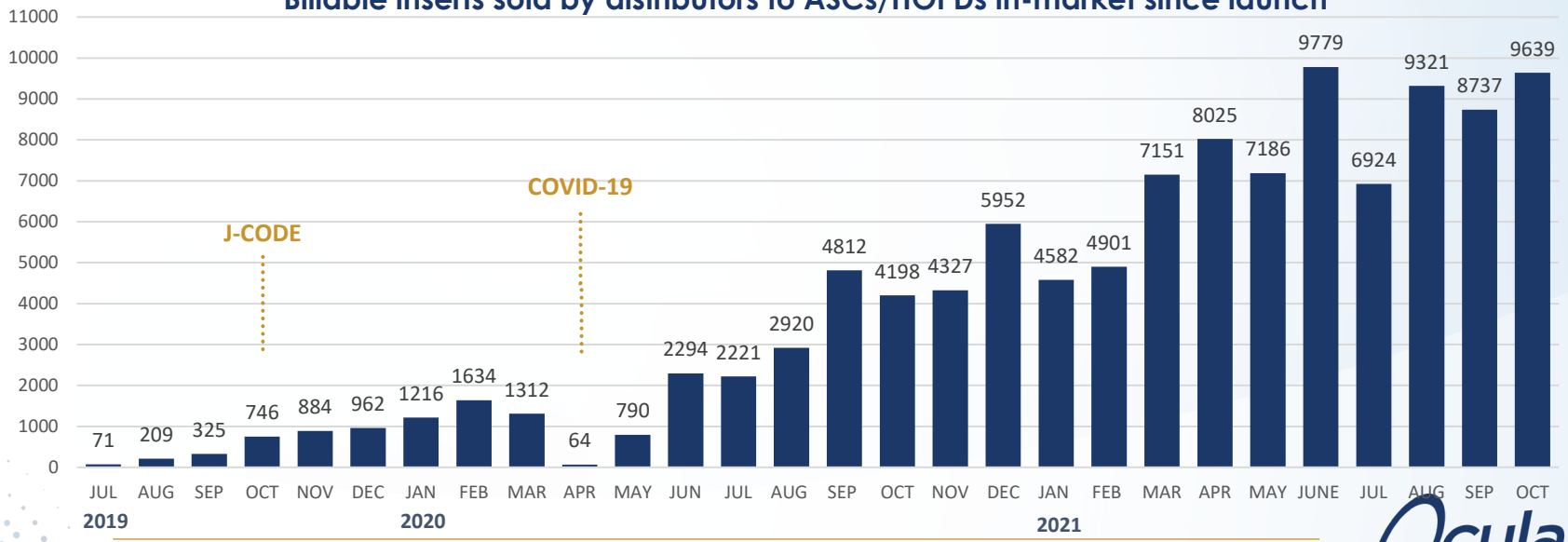
REIMBURSEMENT AND CODING

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

- November OPPS final rule – drug reimbursement
  - ✓ DEXTENZA to be separately paid by Medicare in ASC and HOPD through 2022
  - ✓ DEXTENZA eligible to receive separate payment under non-opioid as a surgical supply provision for 2023 and beyond
- November MPFS final rule – physician payment for insertion
  - ✓ Category 1 CPT Code 68841 effective Jan 1, 2022
  - ✓ Payment in physician office is $37.29 and, in the ASC or the HOPD is $31.58

Strong momentum continues into Q4 2021

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



1. DEXTENZA [package insert]. Bedford, MA: Ocular Therapeutix Inc; 2019. Full prescribing information can be found at https://www.dextenza.com/wp-content/uploads/DEXTENZA-Full-Prescribing-Information.pdf
2. Data on file 00663. Ocular Therapeutix Inc.

Ocular Therapeutix™

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) – Topline data from Phase 2 clinical trial announced in Q4 2021; full dataset being analyzed further to determine next steps

OTX-DED (episodic dry eye) – Expect topline data from Phase 2 clinical trial Q1 2022

DEXTENZA® (inflammation and pain) – Expect good momentum of in-market sales

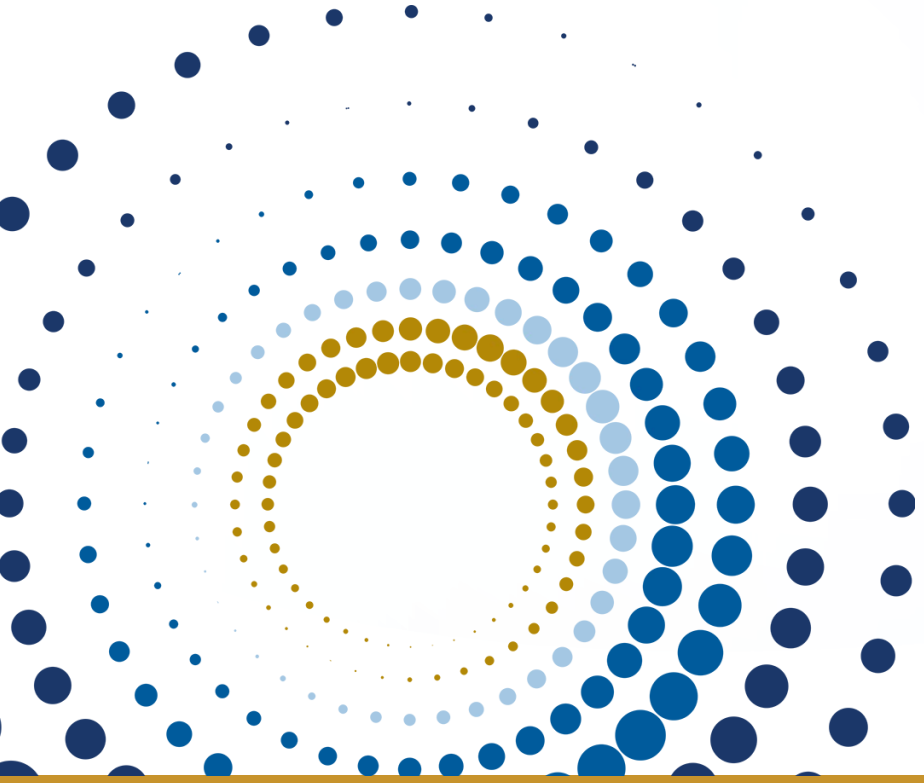
DEXTENZA® (allergic conjunctivitis) – NOW FDA-approved for the treatment of ocular itching associated with allergic conjunctivitis

Ocular Therapeutix™

(NASDAQ: OCUL)

TRANSFORMING DRUG DELIVERY

LEVERAGING A NOVEL TECHNOLOGY PLATFORM



THANK YOU

Ocular Therapeutix™