

(NASDAQ: OCUL)

TRANSFORMING GLAUCOMA CARE WITH DRUG DELIVERY LEVERAGING A NOVEL TECHNOLOGY PLATFORM

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Ocular
Therapeutix™

FINANCIAL DISCLOSURE

The author(s) do have financial interest in this presentation:

**Dr. Goldstein is an employee of
Ocular Therapeutix**



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PIPELINE AT A GLANCE

PRODUCT/PROGRAM	DISEASE STATE	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	REGULATORY APPROVAL
INTRACANALICULAR INSERTS						
Dextenza [®] (dexamethasone ophthalmic insert) 0.4mg	Post-surgical ocular inflammation and pain					
Dextenza [®] (dexamethasone ophthalmic insert) 0.4mg	Allergic conjunctivitis					
Dextenza [®] (dexamethasone ophthalmic insert) 0.4mg	Episodic dry eye					
OTX-CSI (cyclosporine)	Chronic dry eye					
OTX-TP (travoprost insert)	Glaucoma and ocular hypertension					
OTX-BPI (bupivacaine)	Acute ocular pain					
OTX-BDI (besifloxacin & dexamethasone)	Post-op pain, inflammation & anti-bacterial					
INTRACAMERAL IMPLANT						
OTX-TIC (travoprost implant)	Glaucoma and ocular hypertension					
INTRAUTREAL IMPLANTS						
OTX-TKI (tyrosine kinase inhibitor implant)	Wet AMD, DME and RVO [†]					
OTX-IVT* (anti-VEGF antibody implant)	Wet AMD, DME and RVO [†]					

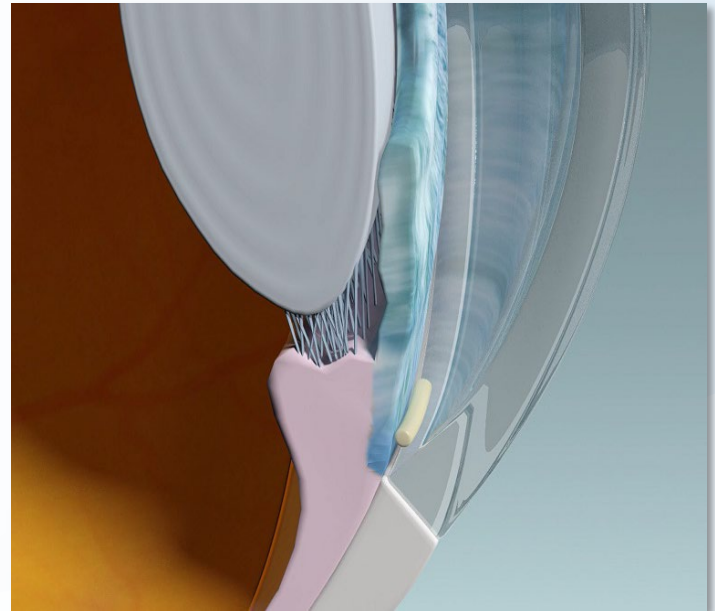
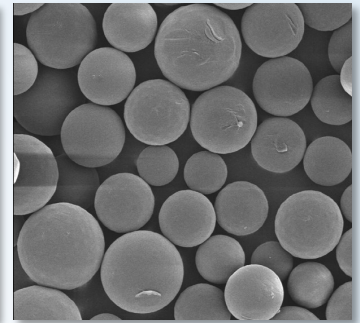
* In Partnership with REGENERON

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

DRUG DELIVERY TO THE INTRACAMERAL SPACE

FACTORS FOR CONSIDERATION IN DESIGNING A LONG DURATION INTRACAMERAL IMPLANT:

- ☐ Clinically-meaningful decrease in IOP
Well-tolerated with clinically-meaningful efficacy
- ☐ Duration of therapy
4 months or more
- ☐ Bioresorbable
Duration of drug and duration of carrier vehicle
- ☐ Implant location and movement
Limited movement and cosmetically invisible, but able to be monitored
- ☐ Corneal health
Gentle to the endothelium

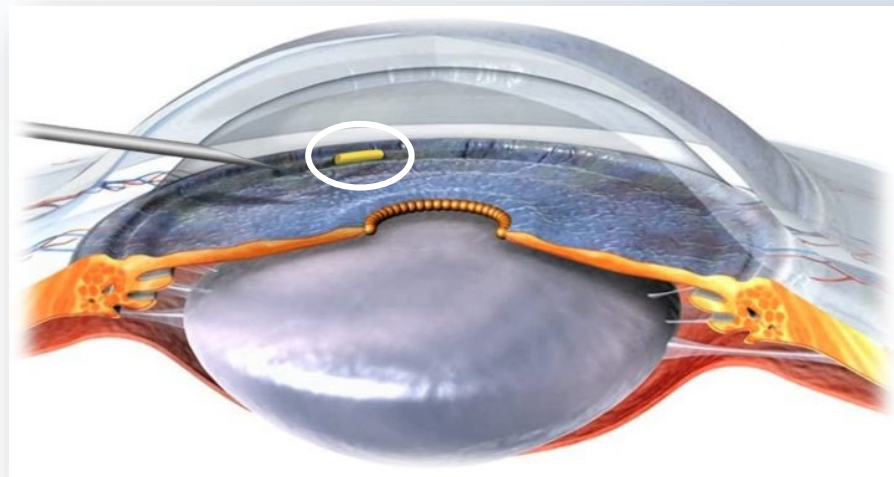


INTRACAMERAL INJECTION IN A PHASE 1 CLINICAL TRIAL FOR THE TREATMENT OF GLAUCOMA

OTX-TIC (travoprost implant)
for intracameral injection

Description:

- Travoprost loaded microparticles in hydrogel
- Preservative-free
- Administered via a single injection with proprietary injector (27G)
- Implant resides in the iridocorneal angle, hydrates in 2 minutes
- Fully biodegradable



In preclinical models (beagle dogs):

- Steady state in vitro and in vivo release through 4 months, which correlates to a duration of 4-6 months in humans
- Demonstrated IOP lowering effect of approximately 25-30% through 4 months



OTX-TIC PHASE 1 STUDY DESIGN

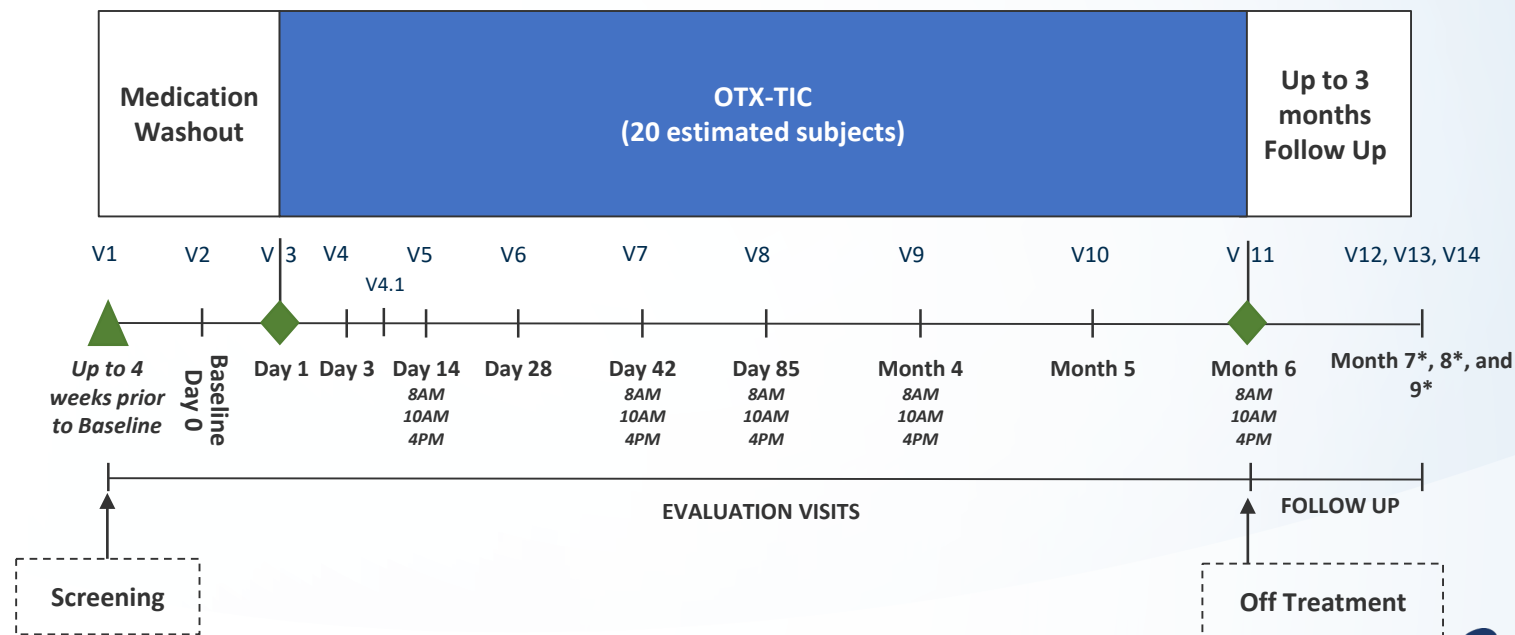
- Open-label, proof-of-concept study
- US study, approximately 20 subjects at 5 sites
- 5 subjects per cohort, 4 cohorts
- 7 month study
- One eye per patient will be treated
- Key Inclusion criteria:
 - Controlled ocular HTN or POAG
 - Open, normal anterior chamber angles on gonioscopy

Objectives

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

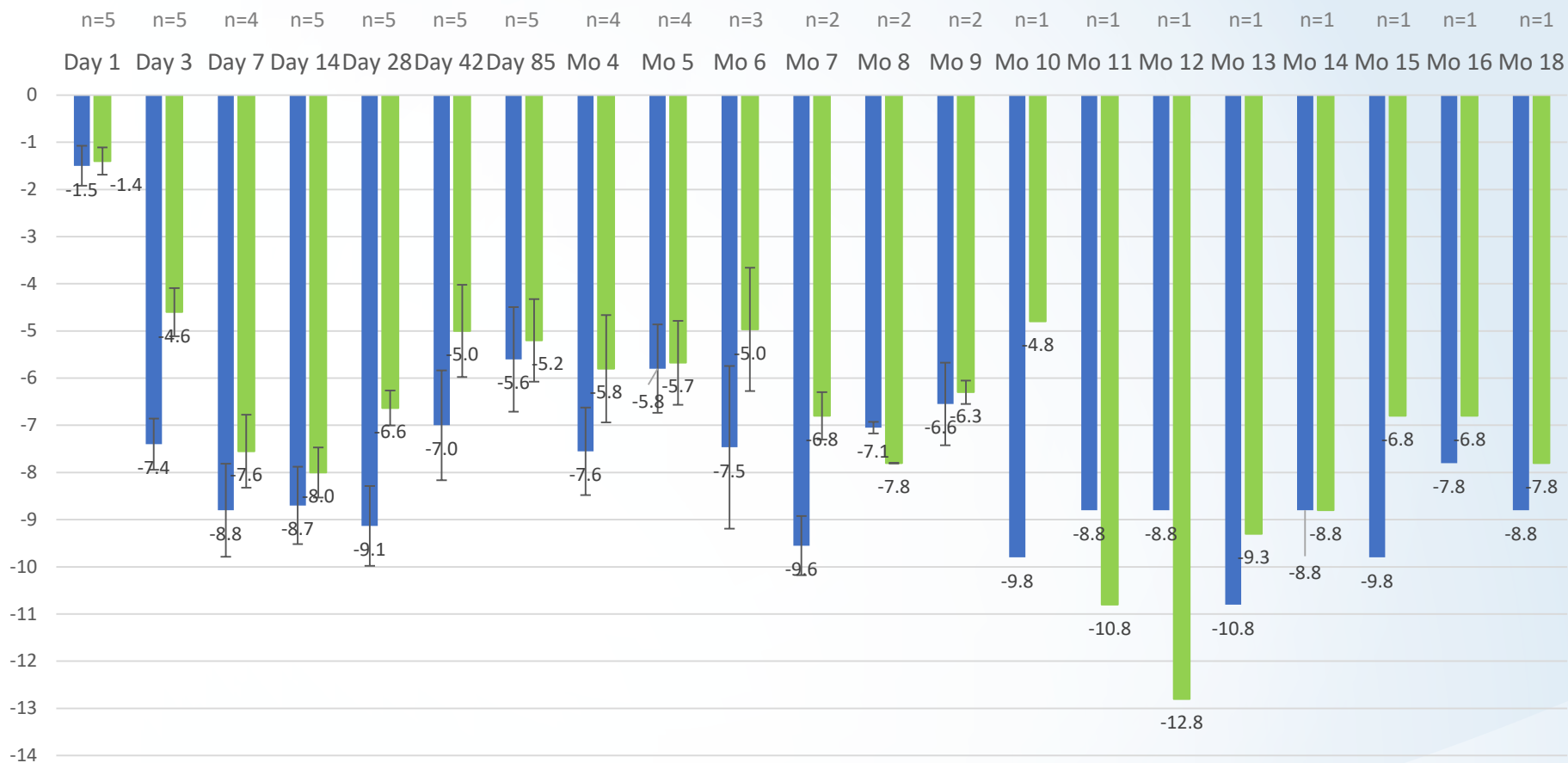
Active Comparator:

Non-study eye receives topical travoprost daily



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

COHORT 1: MEAN IOP CHANGE FROM BASELINE



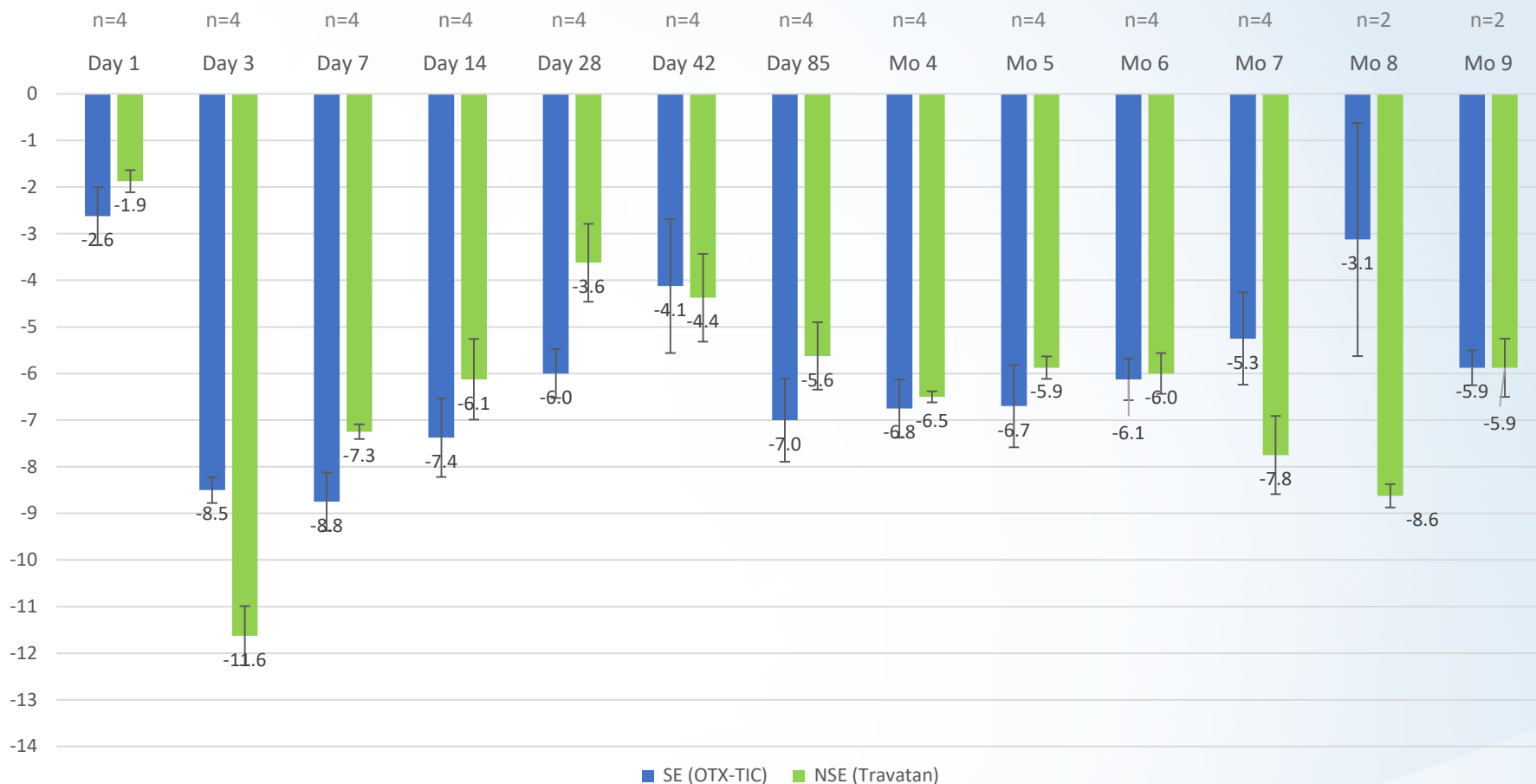
■ SE (OTX-TIC)

■ NSE (Travatan)

NB: Interim look; Unmonitored data.

*If the study eye was given other IOP lowering medication, the IOP value was removed from the analysis.

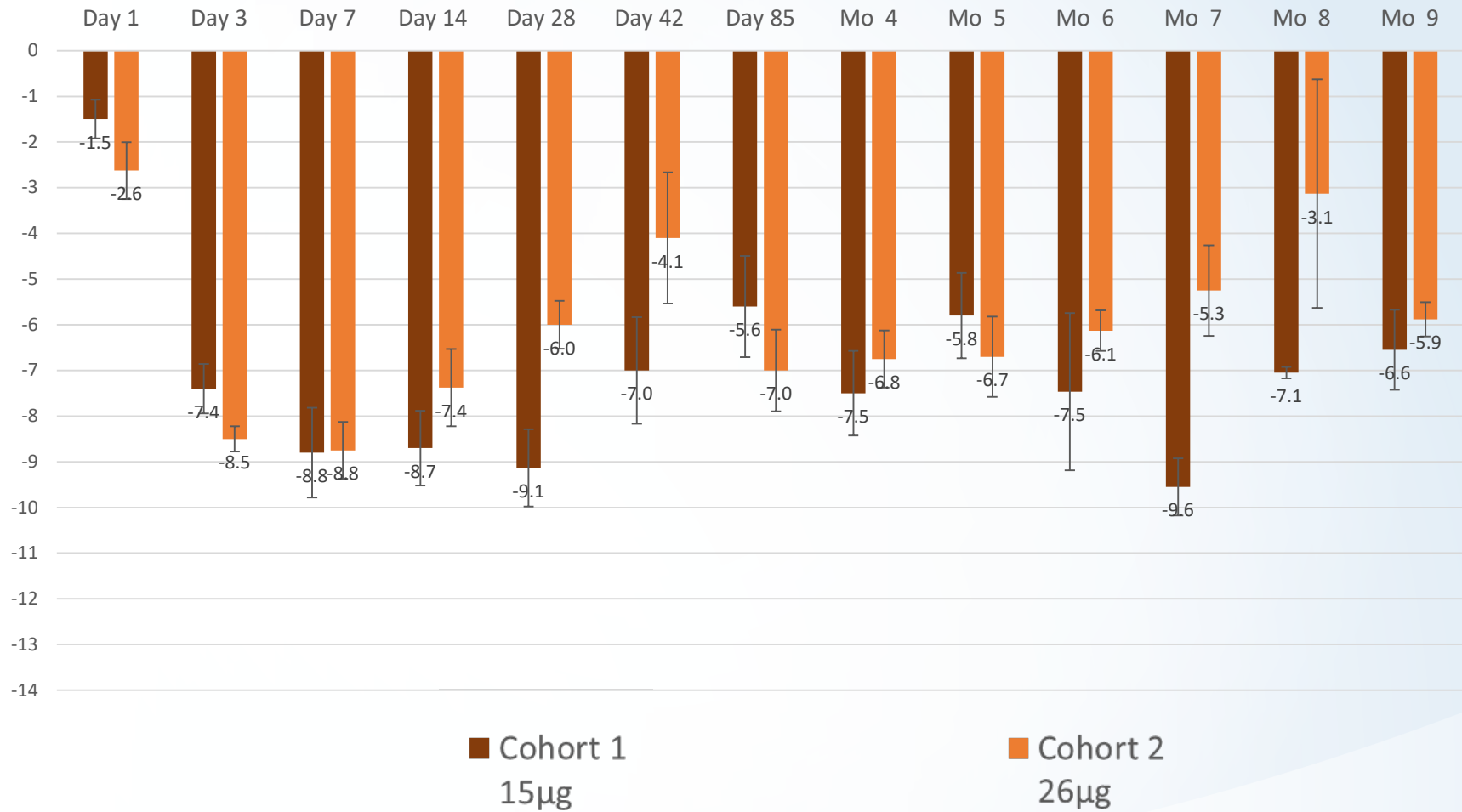
COHORT 2: MEAN IOP CHANGE FROM BASELINE



NB: Interim look; Unmonitored data.

*If the study eye was given other IOP lowering medication, the IOP value was removed from the analysis.

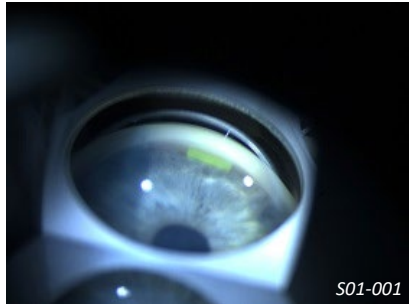
COHORT 1 VS COHORT 2: IOP CHANGE FROM BASELINE



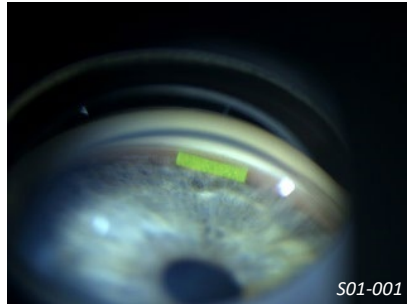
NB: Interim look; Unmonitored data.

IMPLANT VISUALIZATION

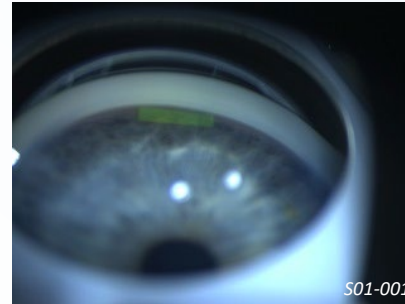
Day 1



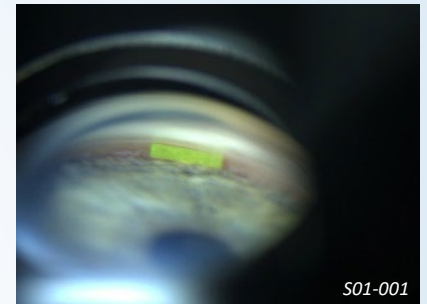
Day 3



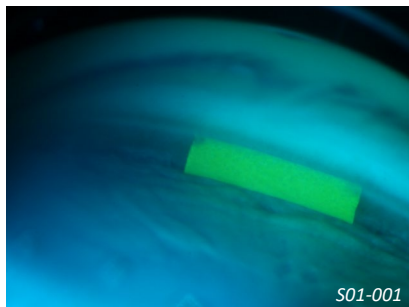
Day 14



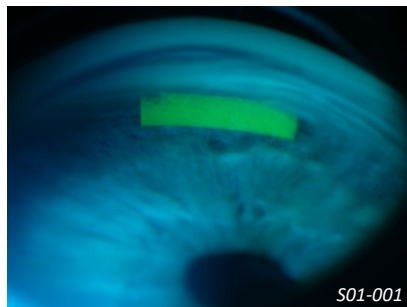
Day 28



Month 4



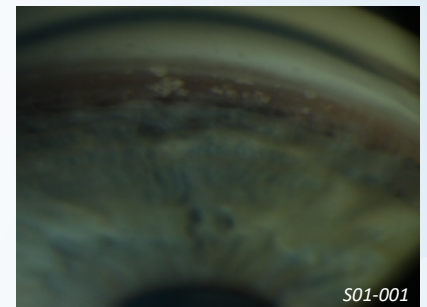
Month 5



Month 6



Month 7



COHORT 1 & 2: SAFETY OVERVIEW

OCULAR ADVERSE EVENTS IN THE STUDY EYE

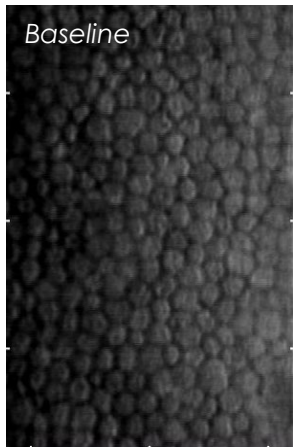
Number of subjects with ocular AEs:	OTX-TIC N=9
Iritis	4
Peripheral anterior synechiae	3
Corneal Edema	1

NB: In Cohort 1, same subjects had iritis and peripheral anterior synechiae. Events were mild and inflammation resolved with medical treatment.

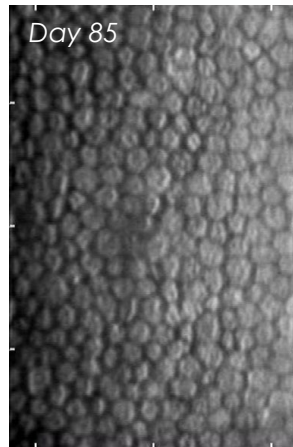
NB: Interim look; Unmonitored data.

COHORT 1 & 2: CORNEAL HEALTH

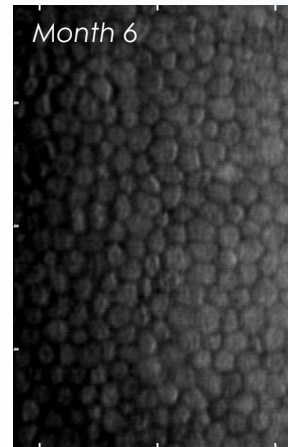
- No clinically-meaningful changes in endothelial cell counts or pachymetry from baseline through for 9/9 subjects in Month 3; 8/8 subjects through Month 6; 6/6 subjects through Month 9
- No clinically-meaningful changes observed in quality of cells
- No changes in values in patients who have reached 9+ months of follow-up (n=5) or 12+ months of follow-up (n=2)



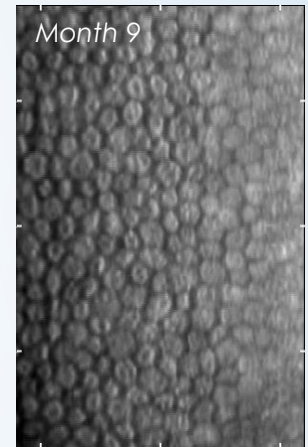
ECC M 3012/mm²
ECC A: 2584/mm²
Pachymetry: 590 µm



ECC M: 3022/mm²
ECC A: 3067/mm²
Pachymetry: 594.33 µm



ECC M: 2950/mm²
ECC A: 2571/mm²
Pachymetry: 574 µm



ECC M: 2950/mm²
ECC A: 3003/mm²
Pachymetry: 573.67 µm

Note: M: manual; A: auto-tracing

CONCLUSIONS

✓ Clinically-meaningful decrease in IOP

Mean IOP values were decreased in patients receiving both OTX-TIC and topical travoprost as early as two days following administration, and mean IOP values remained decreased from baseline values

✓ Duration of therapy

Two subjects exhibited duration of IOP-lowering effect of 9+ months

✓ Bioresorbable

Implant biodegraded in 9 of 9 subjects by 7 months

✓ Implant location and movement

*Implant was not observed to move at slit lamp and was visible at all exams in all patients;
In one subject, there was slight rotation noted at the Day 14 visit as compared to the Day 7 visit*

✓ Corneal health

Endothelial cell counts and pachymetry assessments indicate no changes from baseline



NEXT STEPS

- Study is ongoing; Continued long-term evaluation of both cohorts
- Reformulation for implant that degrades more rapidly, with potential for lower drug concentrations to lower risk of inflammation
- Patient screening and enrollment has begun in Cohort 3 and Cohort 4





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THANK YOU

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