

Revolutionizing Treatment for Demodex Blepharitis Patients

February 8, 2022



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Our Vision

To become a
**leading eye care
pharmaceutical company**
dedicated to addressing **important
diseases with impactful therapeutics.**

Participants on Today's Call



Bobak Azamian, MD, PhD
President and CEO
Tarsus



Eric Donnenfeld, MD
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Garden City, NY



Paul Karpecki, OD
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Agenda

- **Tarsus: Positioned for a Transformational Year**
- **Prevalence and Impact of *Demodex* Blepharitis**
- **Diagnosis and Unmet Need**
- **Real World *Demodex* Blepharitis Case Studies**
- **TP-03 Clinical Data Review**
- **What's Ahead**
- **Questions and Answers**

Corporate Highlights



Pioneering TP-03 for Demodex Blepharitis

First potential FDA approved therapeutic for Demodex blepharitis



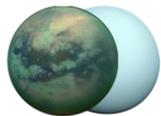
Positive Saturn-1 Pivotal Data

Met all primary & secondary endpoints, complete resolution of Demodex blepharitis signs & high responder rates



Enrollment Complete in Saturn-2 Pivotal Phase 3 Trial of TP-03

Topline results expected April 2022, followed by NDA submission H2 2022



Titan & Atlas Disease Prevalence and Impact Studies

Validate market opportunity, inform commercial strategy and create momentum for launch



Clinical Stage Pipeline with Novel API

Callisto Phase 1b trial for Lyme data expected in 2022

Ersa MGD Phase 2a and Galatea Rosacea Phase 2a trials planned in H2 2022



Strong Balance Sheet

Greater China license and credit facility provide non-dilutive capital

Prevalence and Impact of Demodex Blepharitis

Eric Donnenfeld, MD



TARSUS

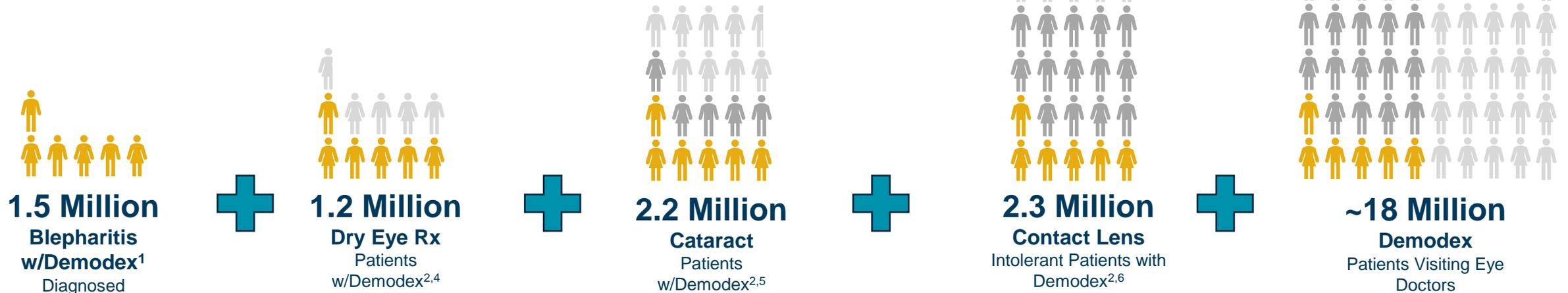
Demodex Blepharitis is a Large and Underserved Market in Eye Care

25 Million

Demodex Blepharitis Patients in the U.S.



- Demodex blepharitis is caused by infestation of Demodex mites
- Characterized by collarettes leading to eyelid margin inflammation, redness, and ocular irritation
- Patients suffer from eyelid itching/burning, blurred vision, and negative impact on daily life



New Studies Confirm Collarette Prevalence in ECP Clinic Patients and Key Patient Segments

Titan Study Overview

IRB-APPROVED RETROSPECTIVE CHART REVIEW

Examined presence of collarettes and other characteristics

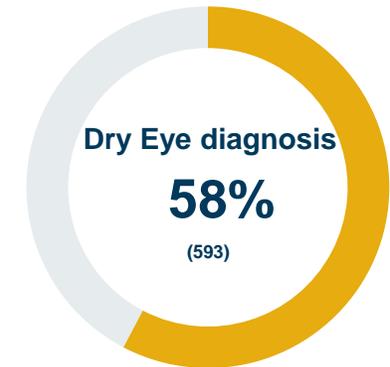
LARGE-SCALE ALL-COMERS (1,032 patients)

Consecutive patients with a wide variety of reasons for visit

DIVERSE ANTERIOR SEGMENT CLINICS

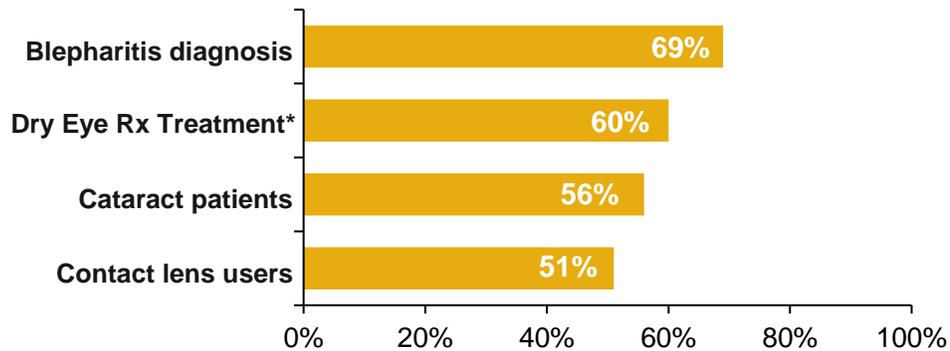
Geographically diverse (7 US sites) including both MD and OD clinics

% of Overall Population



Key Patient Groups

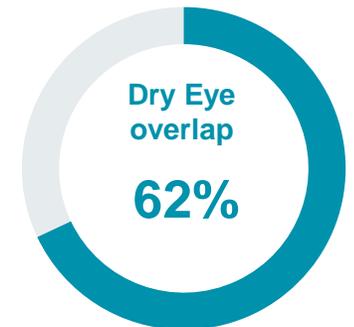
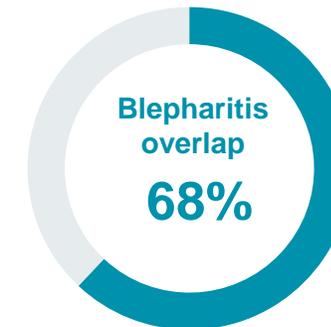
% with collarettes within each group



* 22% of all study patients on Dry Eye Rx treatment

Independent study confirms Titan key findings*

% of overall population



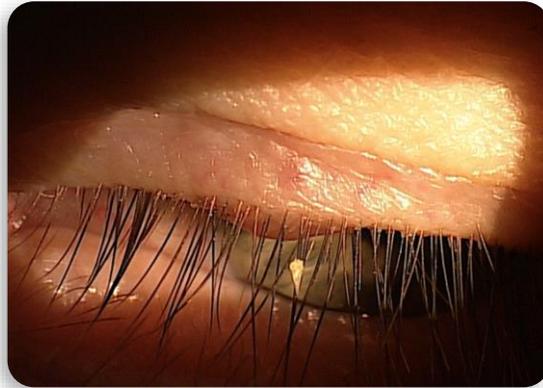
*Teo, Jacobson, Rosenberg, ARVO 2021, n=199, 2 clinics, all comers, Presence of mites confirmed via epilation

Lid Health Directly Impacts Overall Ocular Wellness¹⁻³

Examples of *Demodex* blepharitis and conjunctival/corneal disease¹⁻³



Erythema



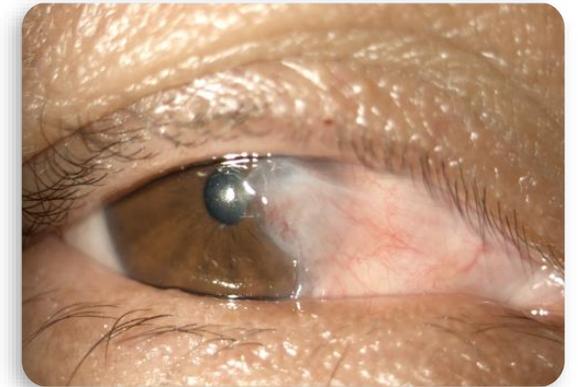
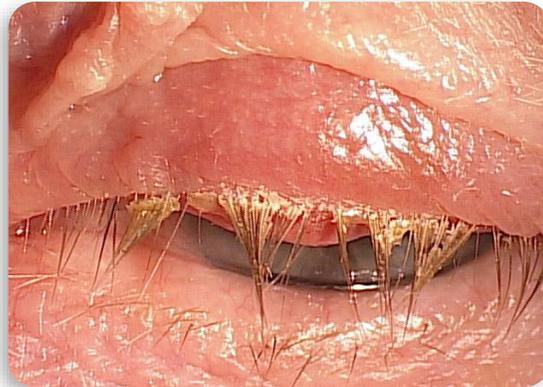
Hordeola/Chalazia



Corneal Scarring

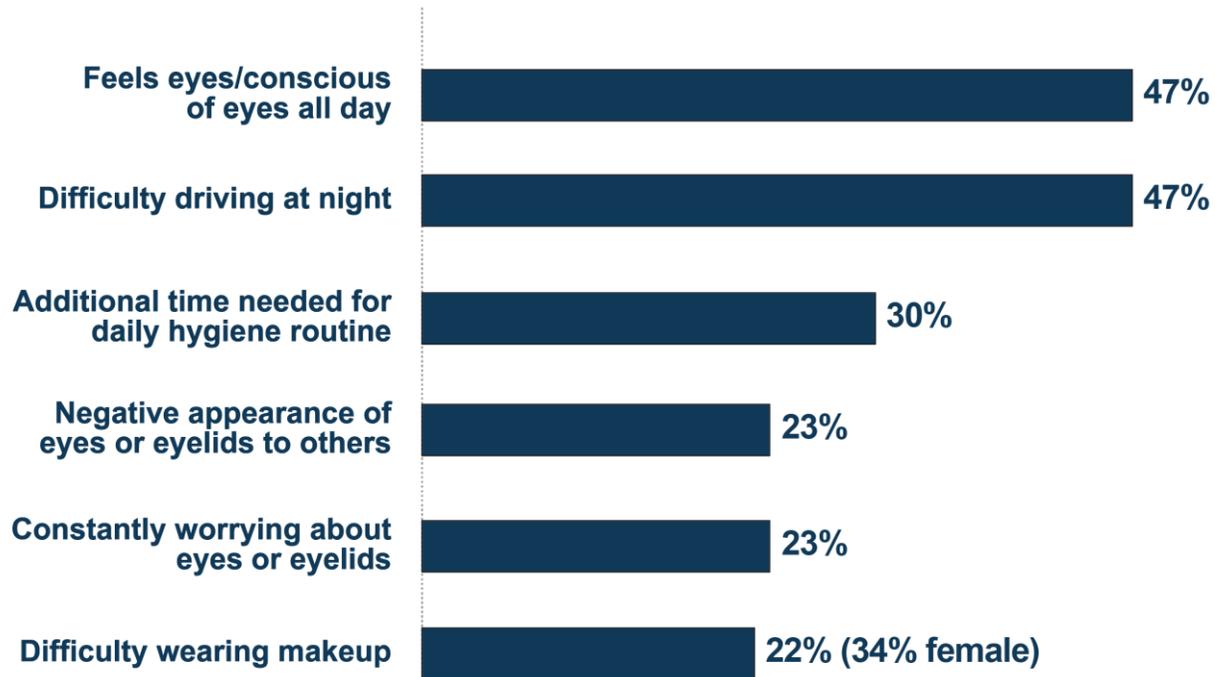


Pterygia



Demodex Blepharitis Takes a Heavy Toll on Patients

The Atlas study was the first multicenter observational analysis of adults with *Demodex* blepharitis* to evaluate the impact of the disease (N=296)¹:



80% of patients say that *Demodex* blepharitis negatively affects their life.¹

Itching and dryness were the top 2 most bothersome symptoms reported²

*Patients were being pre-screened for the Saturn-1 study and had to have 3 clinical signs of disease – collarettes, mites and erythema – to be included in the analysis

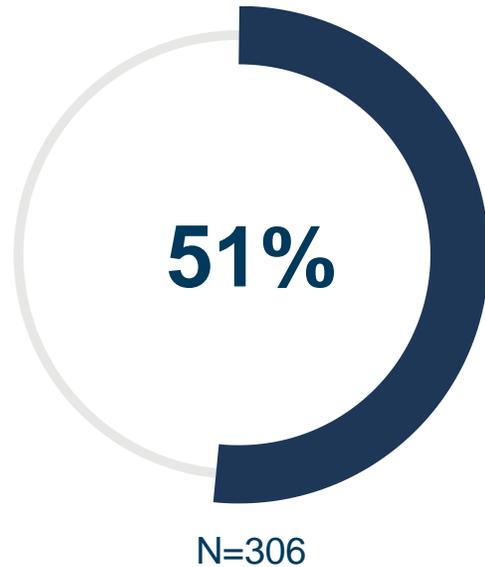
1. Yeu E, Holdbrook M, Baba S, Gomes PJ. Psychosocial impact of *Demodex* blepharitis. Poster presented at: Association for Research in Vision and Ophthalmology Virtual Meeting; May 1-7, 2021.

2. Schachter S, Yeu E, Holdbrook M, Baba S, Gomes PJ. Clinical manifestations of *Demodex* blepharitis. Poster presented at: Association for Research in Vision and Ophthalmology Virtual Meeting; May 1-7, 2021.

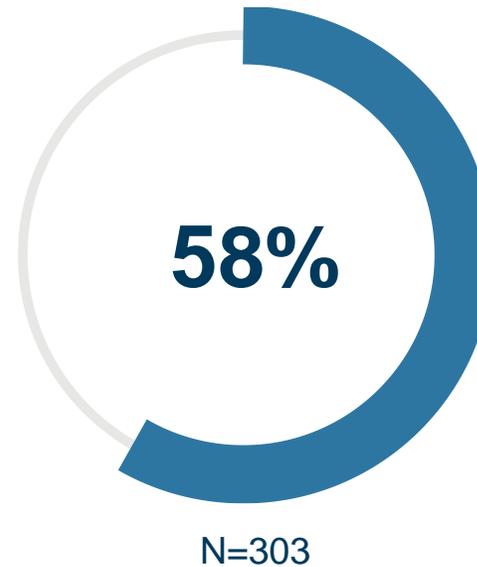
A Serious Burden to Patients and Health Care Systems

The Atlas study also showed that patients with *Demodex* blepharitis reported the following about their experience with identifying their disease¹:

Experienced signs and symptoms >4 years¹



Never diagnosed with blepharitis¹



Over 1/3 of patients make more than 2 visits to the doctor for this disease, with some patients making more than 6 visits*

Diagnosis and Unmet Need

Paul Karpecki, OD

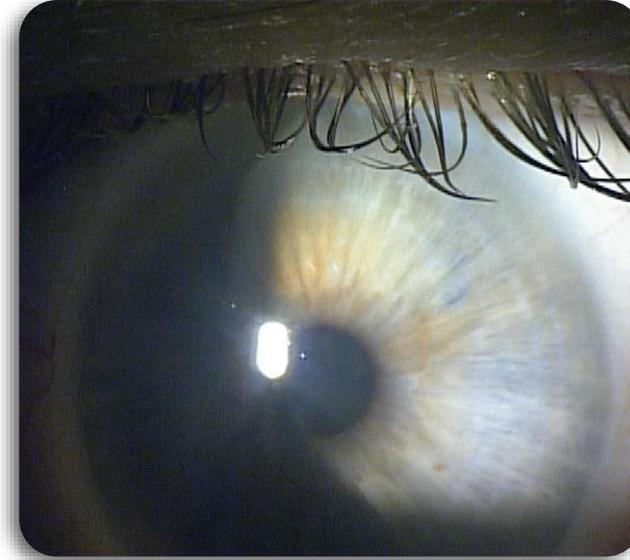


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Demodex Blepharitis May Be Hiding in Plain Sight

Simple ECP Education Can Unlock New Perspective

- The way an ECP examines their patients' eyelids can impact what they can and cannot see
- Collarettes are the pathognomonic sign of *Demodex* blepharitis and can easily be seen on the upper lid when the patient looks down¹



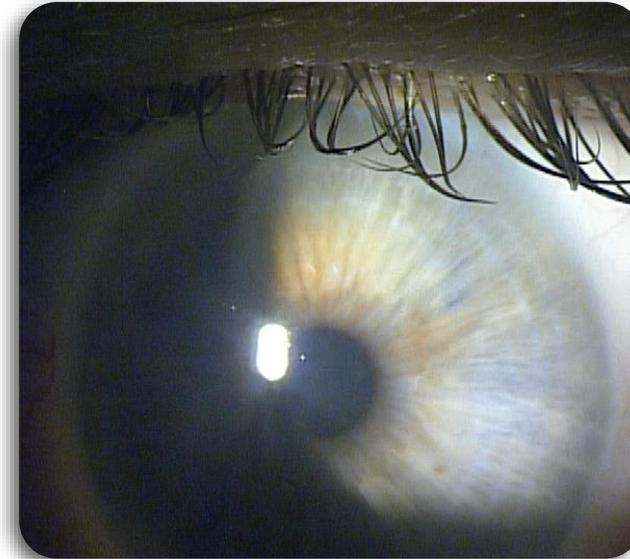
What do you see here?

Demodex Blepharitis May Be Hiding in Plain Sight

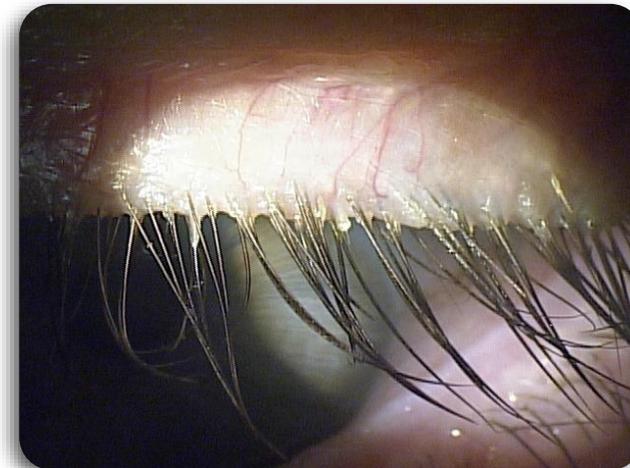
Simple ECP Education Can Unlock New Perspective

- The way an ECP examines their patients' eyelids can impact what they can and cannot see
- Collarettes are the pathognomonic sign of *Demodex* blepharitis and can easily be seen on the upper lid when the patient looks down^{1,2}
- Identifying *Demodex* blepharitis patients can be easily incorporated into practice routines

A slight change in the routine slit lamp exam could greatly improve patient care

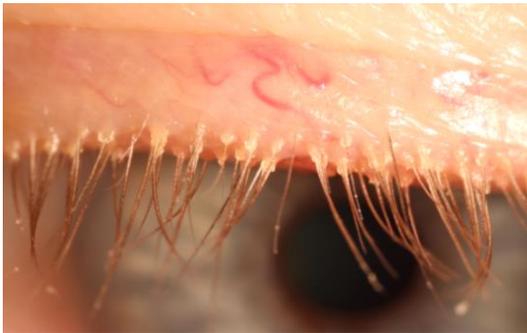


What do you see here?



Vs here?

Collarettes Are Pathognomonic Sign of *Demodex* Blepharitis



Collarettes Are Composed of Mite Waste Products and Eggs¹

- Regurgitated undigested material combined with epithelial cells, keratin, and mite eggs
- Contain digestive enzymes, which cause irritation

Easily and Rapidly Diagnosed with Standard Eye Exam

- Demodex mites found on 100% of lashes with collarettes²
- Collarettes found in ~ 58% of eye care patients³

Educate ECPs to Have Patients Look Down

- Drive slight change in behavior to create 'a-ha' moment
- Compelling visuals for ECPs and patients

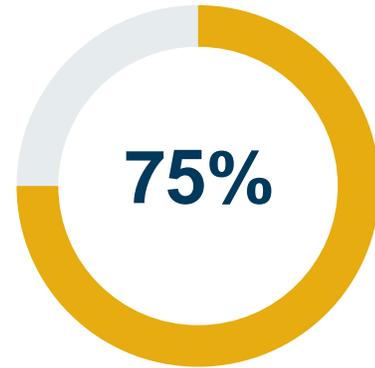
1. Fromstein SR, Harthan JS, Patel J, Opitz DL. Demodex blepharitis: clinical perspectives. Clin Optom (Auckl). 2018;10:57-63.

2. Gao et al., Invest Ophthalm and Vis Sci, September 2005, Vol. 46, No. 3089-3094

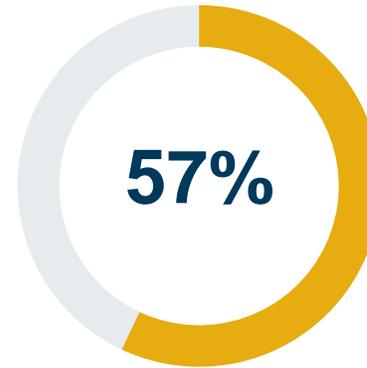
3. Sadri E, Yeu E, Trattler W, Holdbrook M, Baba S. The prevalence of collarettes and Demodex blepharitis in ophthalmology and optometry practices. Poster presented at: American Society of Cataract and Refractive Surgery Annual Meeting; Las Vegas, Nevada; July 24, 2021.

Titan Study Revealed Tea Tree Oil and Lid Wipes Are Ineffective at Treating Demodex Blepharitis

High percentage of collarettes observed in patient populations using tea tree oil and lid wipes



Tea Tree Oil (TTO)
(n=51)



Lid Wipes
(n=102)

- Over the counter eye care treatments can also lead to ocular stinging/burning, driving discontinuation in many patients
- Tea tree oil toxicity may extend to human meibomian gland epithelial cells¹
- There are currently no U.S. FDA approved therapeutics for Demodex blepharitis

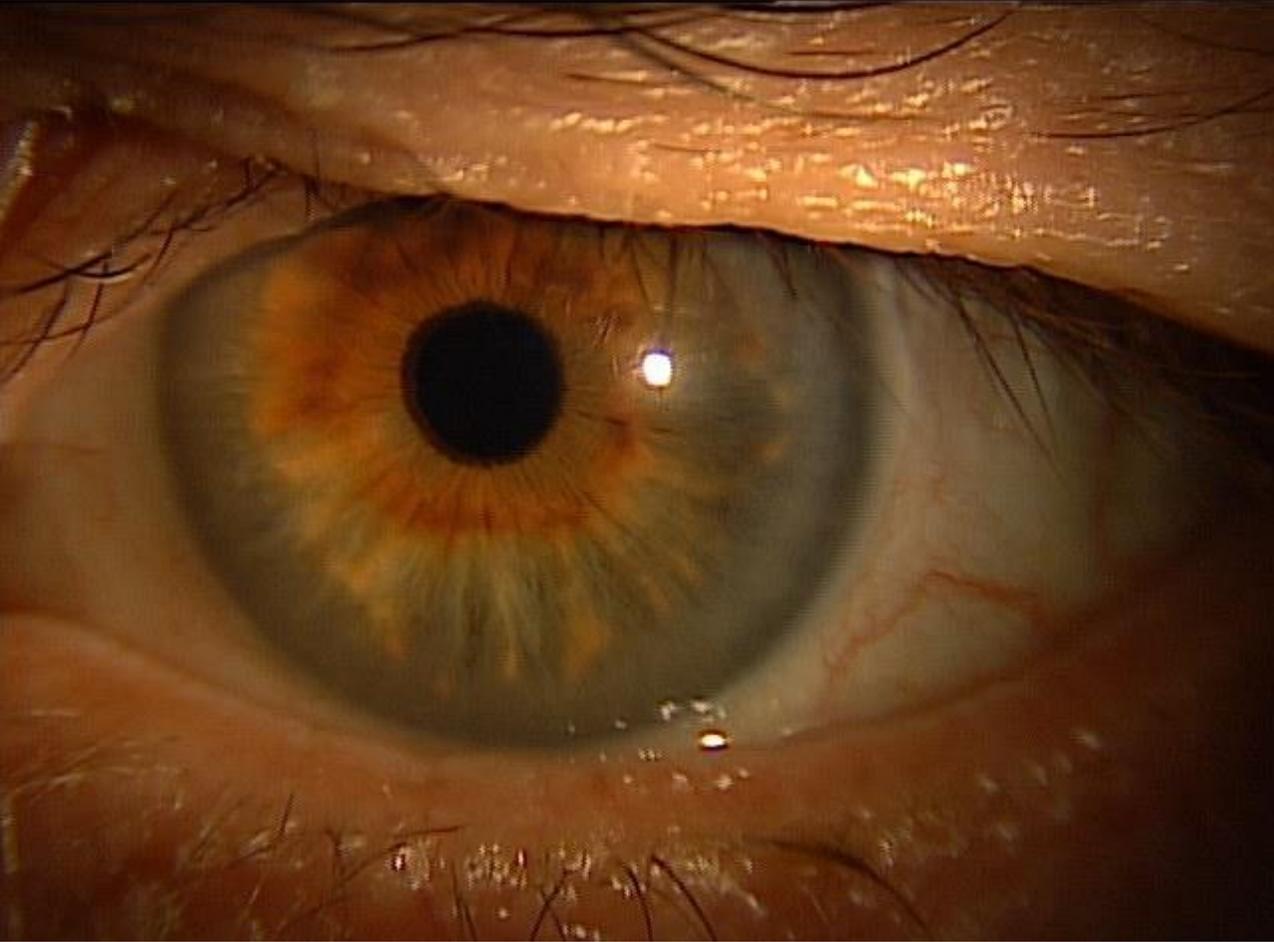
Case Studies

Paul Karpecki, OD
Eric Donnenfeld, MD



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Case Study: Recalcitrant Dry Eye Patient



Case Study: Demodex blepharitis with Recalcitrant Dry Eye

Presentation:

- 73 y/o Caucasian male complains of dry eye
- Secondary complaint of itching and tearing, mild in severity
- Condition has been present for 3 years and has seen two previous doctors

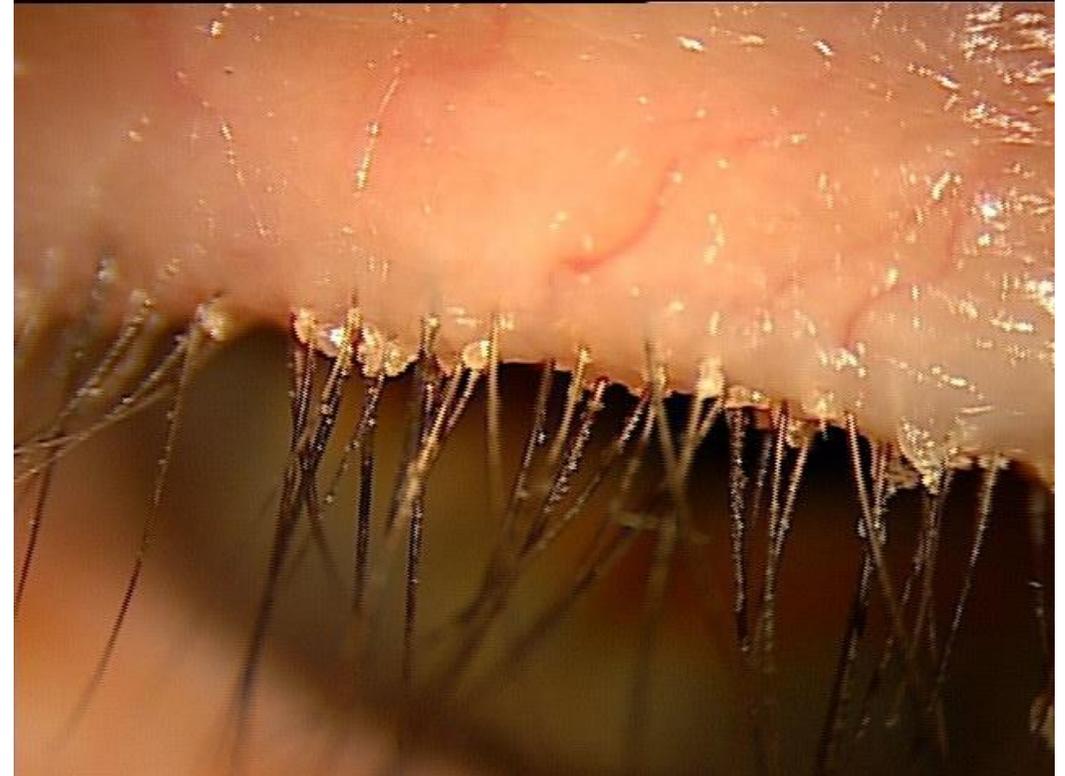
History/Exam:

- Slightly high osmolarity in both eyes
- Currently using artificial tears as needed, gel at night and lid scrubs daily
- Blurred vision with fluctuations, not correctable to 20/20

Case Study: Demodex blepharitis with Recalcitrant Dry Eye

Treatment:

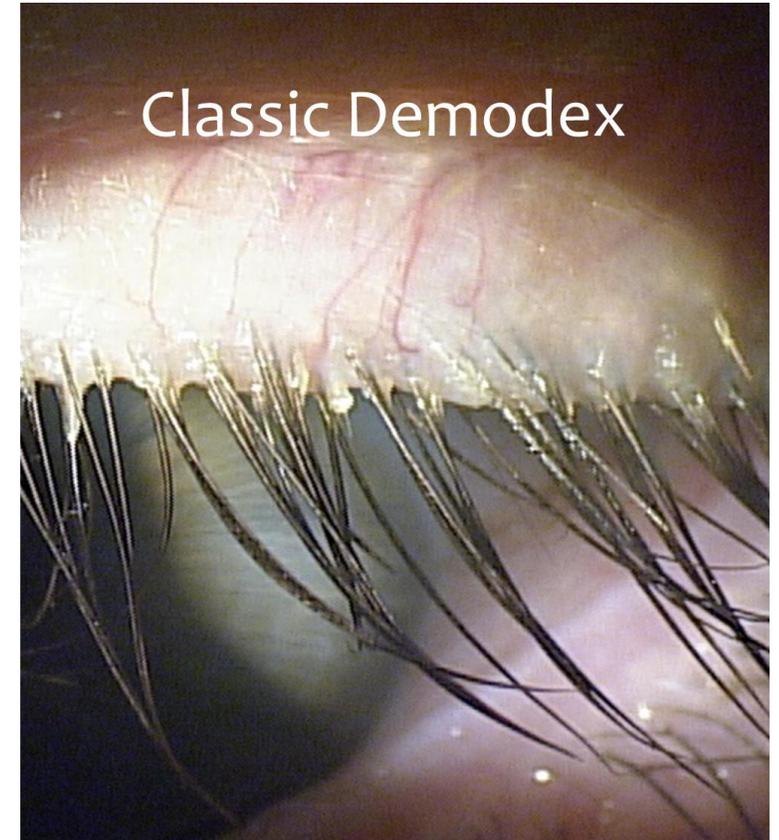
- In-office, microblepharoexfoliation (MBE) and TTO lid scrubs twice daily, followed by in-office MBE every 2-3 months
- Most recent visit (4 years later) still complains of dry eyes, blurred vision and tearing
- Vision still not optimized
- Osmolarity still high



Case Study: Cataract Patient

Presentation:

- 66 y/o male patient presents for a cataract evaluation with history of chronic ocular irritation
- Vision overall pretty good, but glare is worsening
- Complains of foreign body sensation and itching. (+) Redness upon awakening.



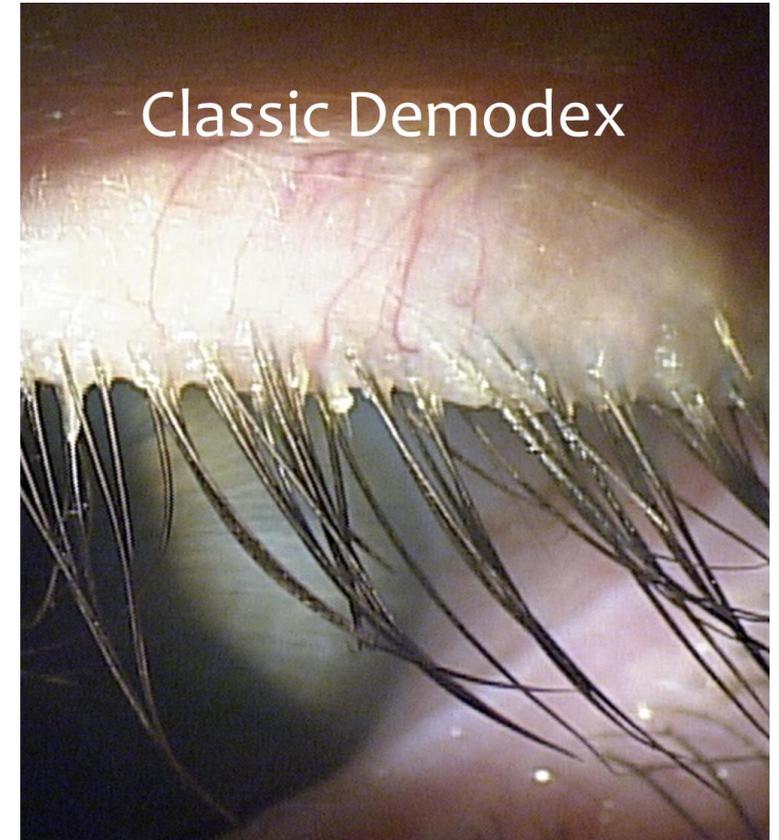
Case Study: Cataract Patient

History/Exam:

- Has seen multiple optometrists and ophthalmologists
- Treated in past for ocular allergy with topical antihistamines and corticosteroids
- Treated for dry eye with Restasis and Xiidra
- Treated for meibomian gland disease with hot compresses, oral omega-3s, and oral doxycycline
- All treatments have been ineffective

Treatment:

- Delayed cataract surgery to perform:
 - Blepharoexfoliation
 - Tea Tree Oil (c/o irritation and redness)



TP-03 Clinical Data Review

Elizabeth Yeu, MD



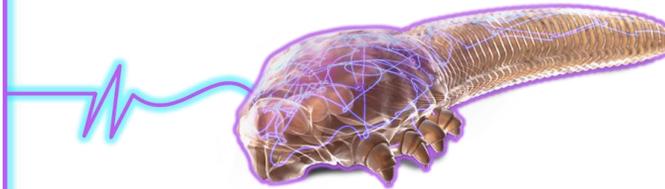
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TP-03 is a Novel Therapeutic Designed to Eradicate Demodex Mites and Treat Demodex Blepharitis

Lotilaner

CC1=CC=C(C=C1)S[C@@H](C2=CC=C(C=C2)N1O)C(F)(F)F

- Potent non-competitive antagonist of insect and arachnid GABA-Cl channels
- Highly lipophilic molecule
- **Projected Orange Book Exclusivity to at least 2038**



	Product Form	Multi-dose eye drop solution bottle, preserved
	Targeted Use	Treatment of Demodex blepharitis
	MOA	Paralysis and death of Demodex mites
	Diagnosis	Collarettes identified in standard eye examination
	Dosing	BID* for 6 weeks
	Efficacy Goal	Collarette cure rate (primary), mite eradication, lid erythema (redness)
	Safety Goal	Well-tolerated safety profile



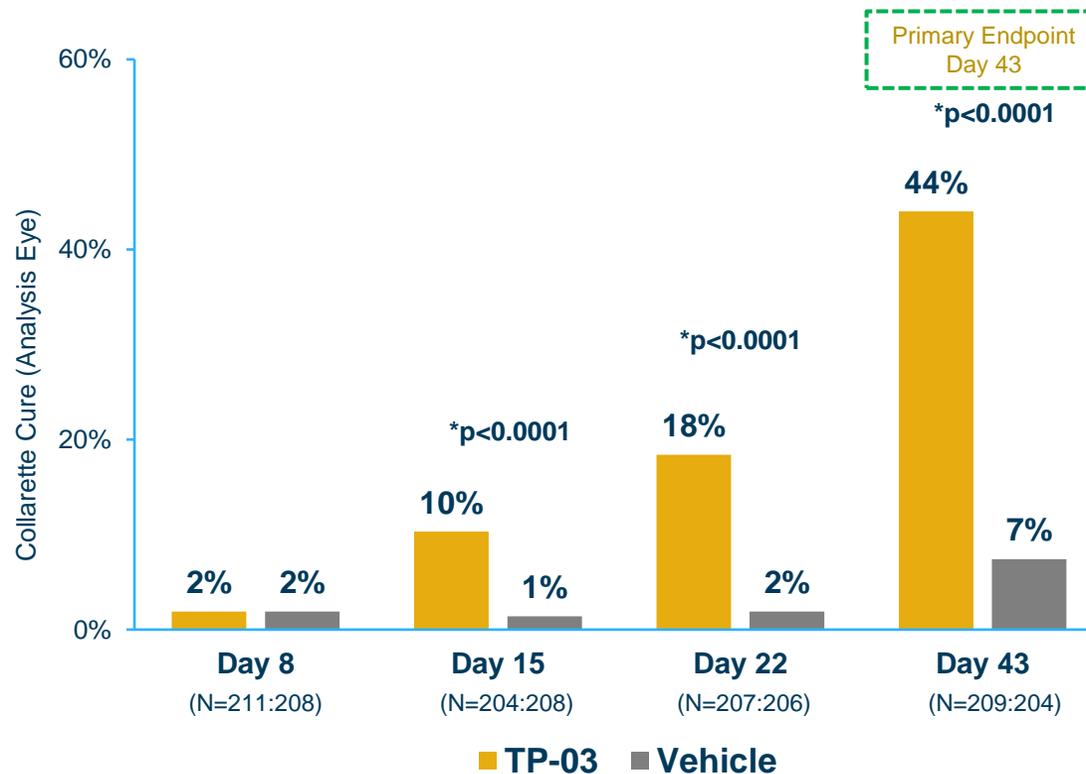
TP-03 Met Primary and All Secondary Endpoints and Complete Resolution of Demodex Blepharitis in Saturn-1

- **Efficacy:** Met all pre-specified primary and secondary endpoints, including:
 - ✓ Primary Endpoint: Complete **Collarette Cure** $p < 0.0001$
 - ✓ Clinically Meaningful **Collarette Cure** (Grade 0 or 1) $p < 0.0001$
 - ✓ Secondary Endpoint: **Mite Eradication** $p < 0.0001$
 - ✓ **Erythema** (Redness) Cure $p = 0.0001$ and **Erythema Response** $p = 0.0002$
- **Safety:** TP-03 was well-tolerated, with safety profile similar to vehicle
 - ✓ All TP-03-related AE's were mild
 - ✓ 92% of patients reported the drop to be neutral to very comfortable
 - ✓ No significant findings across several safety assessments

Primary Endpoint of Complete Collarette Cure Achieved

Regulatory Endpoint of Complete Collarette Cure Observed by Week 2

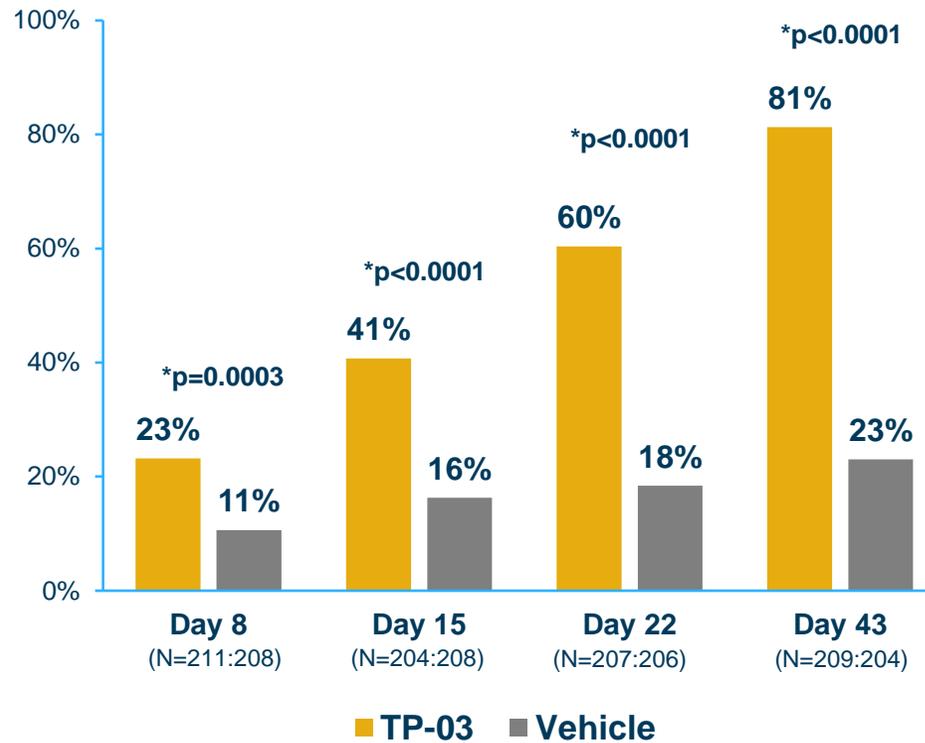
Collarette Cure (0-2 collarettes)*



Clinically Meaningful Collarette Cure

Clinically Meaningful Collarette Cure Observed by Week 1
Over 90% Avg. Reduction in Collarettes (Over 100 to 10 or Less per Lid)

Grade 0 or 1 Collarettes



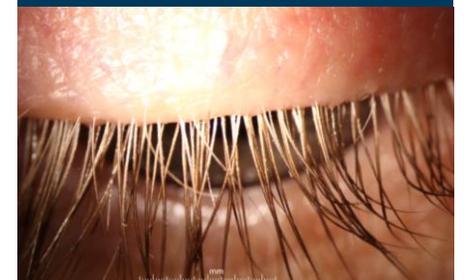
Average Baseline (Grade 3)



Grade 1



Grade 0



Photos are images taken of patients in Saturn-1 with the corresponding collarette grade.

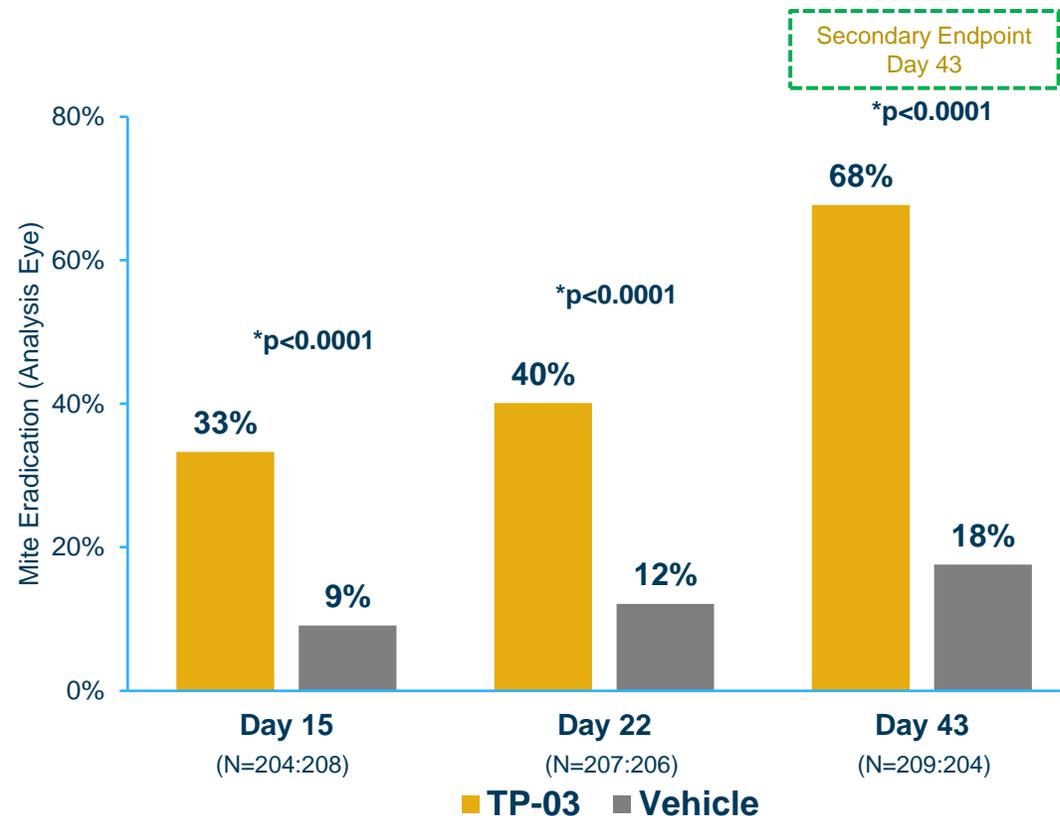
Images demonstrate results which we believe are representative of favorable treatment with TP-03 for patients participating in the Saturn-1 trial. Other patients may experience different or less favorable results.

Secondary Endpoint of Mite Eradication Rate Achieved

Complete Mite Eradication Observed by Week 2

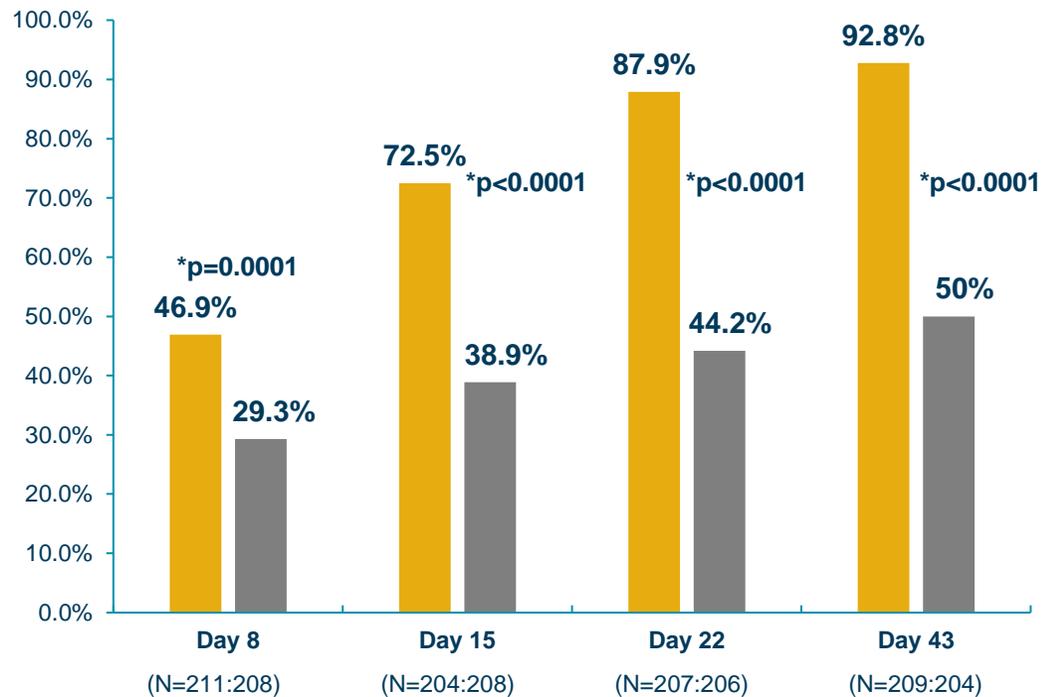
68% of Patients Experienced Complete Eradication at Week 6 (Secondary Endpoint)

Mite Eradication (0 mites)



Collarette and Mite Eradication Responder Rates

Patients improving by ≥ 1 collarette grade at each timepoint



Patients achieving ≤ 0.5 mites / lash at day 43

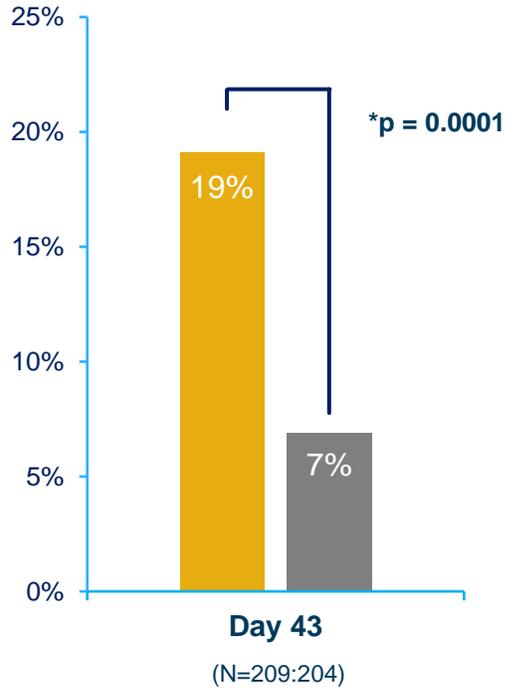


TP-03 Vehicle

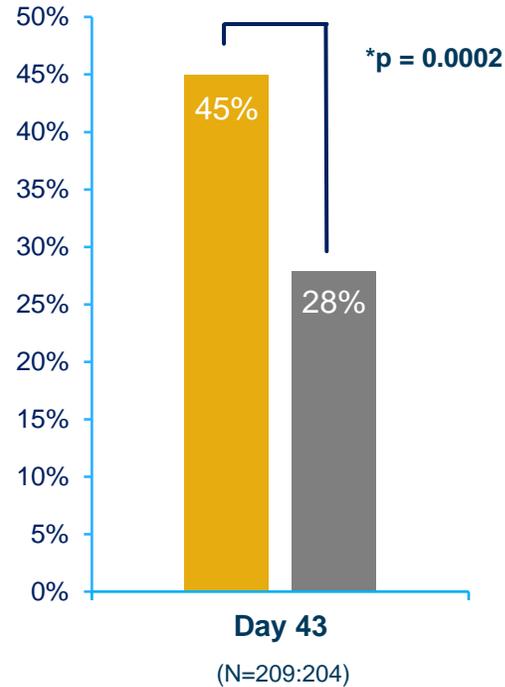
Erythema (Redness) Cure and Response

19% of Patients Experienced Complete Erythema Cure at Day 43
 45% of Patients Experienced Erythema Improvement at Day 43

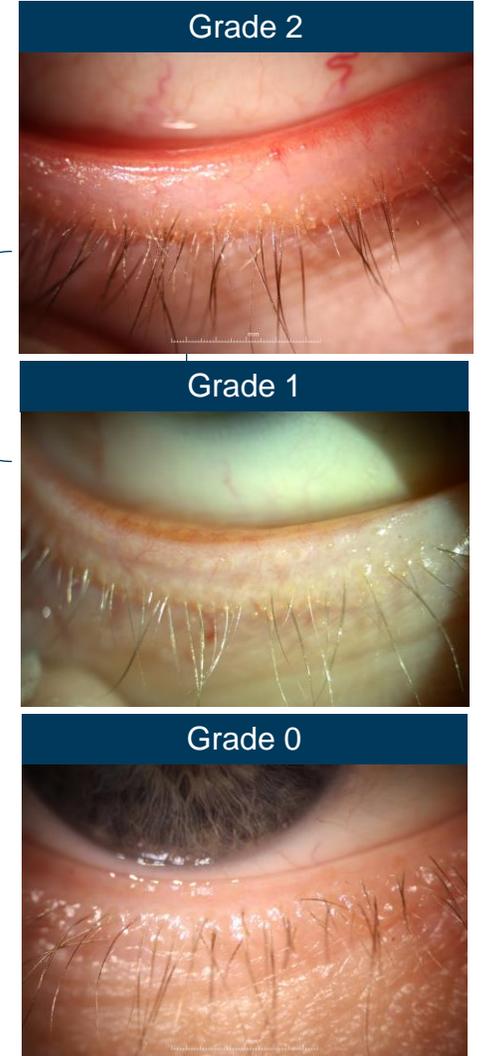
Grade 0 Erythema



1 Grade or More Erythema Improvement



Average
baseline 1.5



Improvements Seen Post Treatment Have Significant Clinical Impact

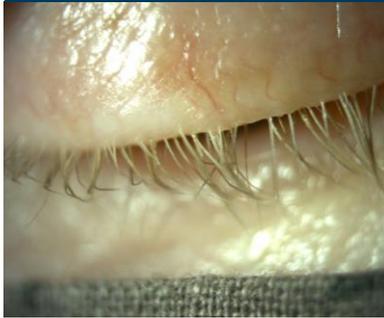
Cure rates and clinically meaningful effects validate the opportunity to benefit a large proportion of patients

Complete Collarette Cure

Baseline (Day 0)
Grade 4



Post Treatment (Day 43)
Grade 0



Clinically Meaningful Collarette Cure

Baseline (Day 0)
Grade 4



Post Treatment (Day 43)
Grade 1



Baseline (Day 0)
Grade 2



Post Treatment (Day 43)
Grade 1



Erythema Response

Baseline (Day 0)
Erythema Grade 2



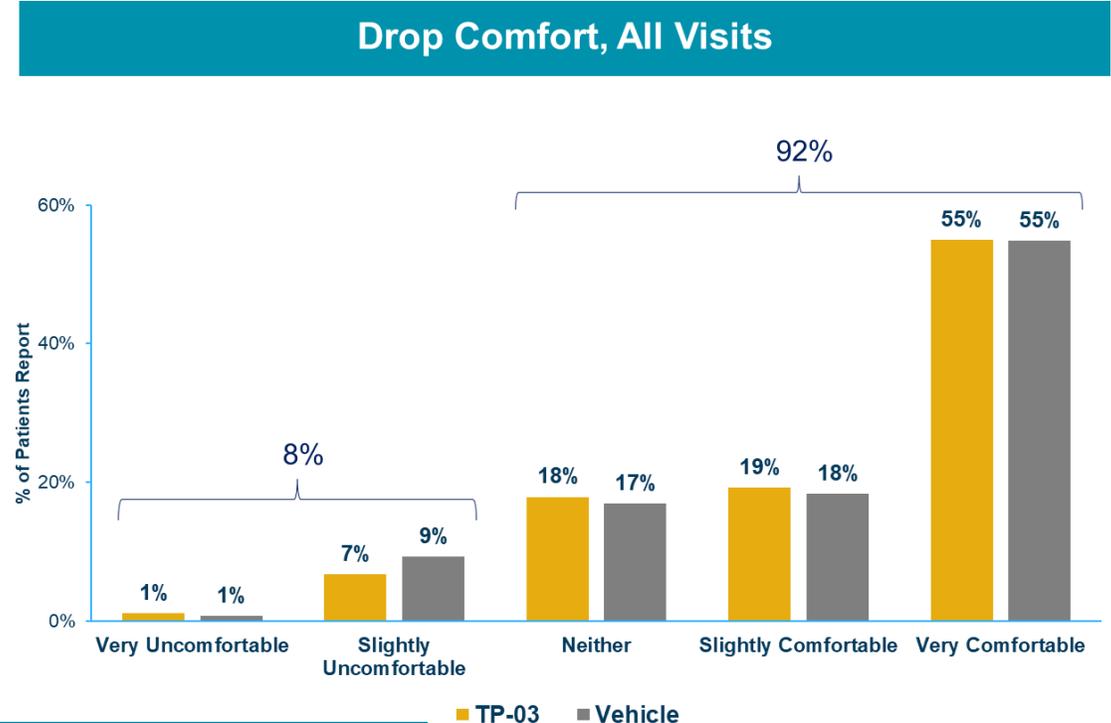
Post Treatment (Day 43)
Erythema Grade 1



Adverse Event and Drop Comfort Summary

All TP-03-related AE's were mild
92% of patients reported the drop to be neutral to very comfortable

Treatment related ocular AEs occurring at rate of $\geq 1\%$ in active group		
	TP-03 (n=212)	Vehicle (n=209)
Instillation site pain/burning/stinging	25 (11.8%)	16 (7.7%)
Instillation site pruritis	3 (1.4%)	7 (3.3%)
Visual acuity reduced	3 (1.4%)	5 (2.4%)
Eye pain	3 (1.4%)	2 (1.0%)
Eye discharge	3 (1.4%)	1 (0.5%)
AE Severity	All Mild	One moderate AE All other AEs mild



No Significant Findings Across Multiple Safety Assessments:

- Corrected Distance Visual Acuity
- Intraocular pressure
- Corneal Staining
- Slit lamp biomicroscopy
- Fundus exam
- Endothelial cell density*

* In a subset of 21 patients. Endothelial cell density will be further evaluated in the Saturn-2 Trial

What's Ahead

Bobak Azamian, MD, PhD
President & CEO



Enrollment Complete in the TP-03 Saturn-2 Pivotal Phase 3 Trial

	Saturn-1 (Pivotal Phase 2b/3)	Saturn-2 (Pivotal Phase 3)
Size	421	412
U.S. Sites	15	21 ¹
Primary Endpoint	Complete Collarette Cure (Grade 0) 44% vs. 7% (p<0.0001)	Complete Collarette Cure (Grade 0)
Secondary Endpoints	Mite Eradication 68% vs. 18% (p<0.0001) Composite Cure 14% vs. 1% (p<0.0001) Lid Erythema Cure 19% vs. 7% (p<0.0001)	Mite Eradication Composite Cure Lid Erythema Cure ²
Safety Endpoints	Well tolerated with safety profile similar to vehicle	Similar to Saturn-1 with additional standard safety measures ³
Status	Met primary and all secondary endpoints	Enrollment complete On track for topline data in April 2022

Anticipated NDA submission of TP-03 for Demodex blepharitis in H2 2022

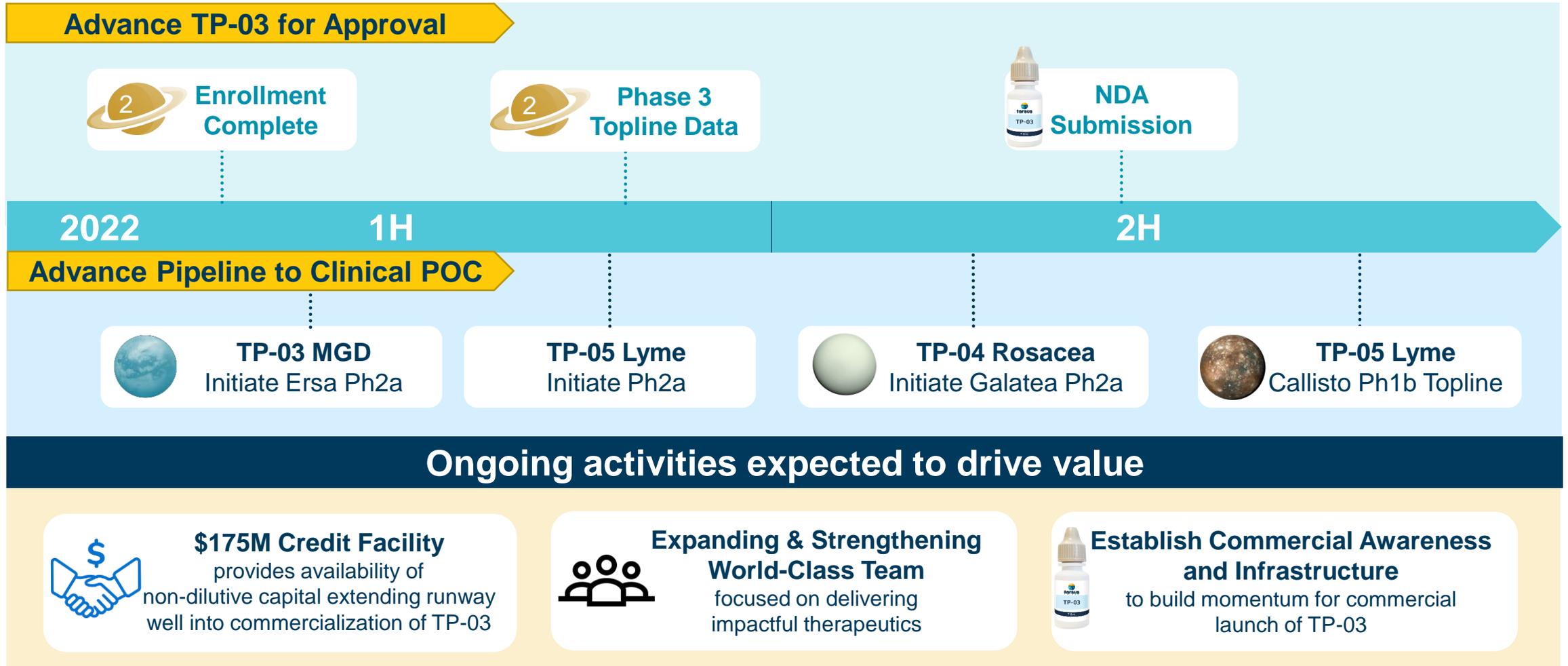


\$175 Million Credit Facility Provides Availability of Non-dilutive Capital

- Extends cash runway well into the anticipated commercialization of TP-03
- Executed February 2022
- The \$175 million is available as follows
 - \$40 million at closing with \$20 million drawn, \$25 million at TP-03 NDA submission, \$35 million at TP-03 FDA approval, and \$75 million upon achievement of certain revenue thresholds and other conditions
 - Future minimum draws are in \$5 million increments at Tarsus' election
 - 4-year interest only period and is extendable to 5 years upon meeting certain conditions
 - No warrant coverage to the lenders



2022 Key Catalysts Position Tarsus for Growth



Q&A



TARSUS



Tarsus