CLEARSIDE BIOMEDICAL

Corporate Presentation

September 2022

Forward-Looking Statements

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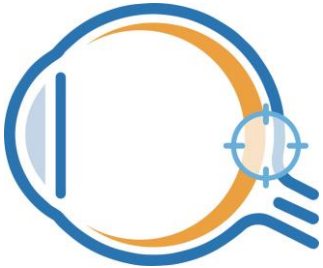
Developing and Delivering Treatments that Restore and Preserve Vision for People with Serious Back of the Eye Diseases

Versatile Therapeutic Platform

SCS Microinjector® with proprietary drug formulations target the suprachoroidal space

- First FDA Approved Product: XIPERE™
- Proprietary Access to the Suprachoroidal Space (SCS®)
- Utilization Across Small Molecules and Gene Therapy
- Ability to Target Multiple Ocular Diseases
- Internal Research & Development Pipeline
- External Collaborations for Pipeline Expansion

Core Advantages of Treating Via the Suprachoroidal Space (SCS®)



TARGETED

for efficacy

The back of the eye is the location of many irreversible and debilitating visual impairments

COMPARTMENTALIZED

for safety

Drug is compartmentalized in the suprachoroidal space, which helps keep it away from non-diseased tissues and entirely behind the visual field

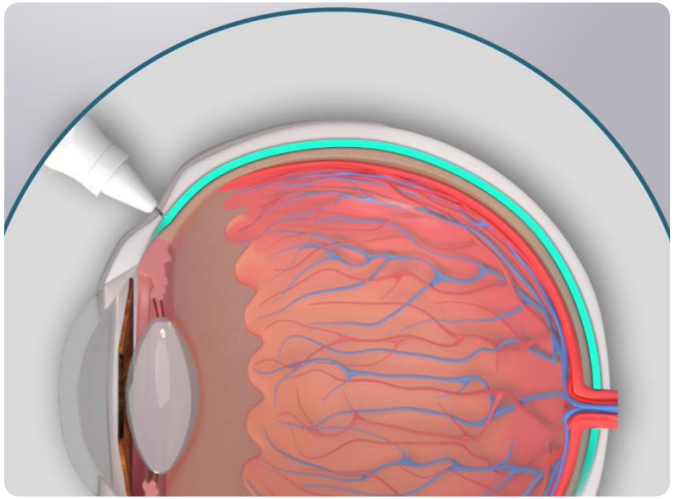
BIOAVAILABLE & PROLONGED DRUG LEVELS

for durability

Fluid spreads circumferentially and posteriorly when injected within the suprachoroidal space, bathing the choroid and adjacent areas with drug

Sources: Rai UDJ, Young SA, Thrimawithana TR, et al. The suprachoroidal pathway: a new drug delivery route to the back of the eye. Drug Discov Today. 2015;20(4):491-495. | Moisseiev E, Loewenstein A, Yiu G. The suprachoroidal space: from potential space to a space with potential. Clin Ophthalmol. 2016;10:173-178. | Chiang B, Jung JH, Prausnitz MR. The suprachoroidal space as a route of administration to the posterior segment of the eye. Adv Drug Deliv Rev. 2018;126:58-66.

Clearside's SCS Microinjector®: The Only Clinically Tested Injection Device for Suprachoroidal Drug Delivery



SUPRACHOROIDAL SPACE INJECTION

Novel SCS Microinjector® allows for precise delivery into the suprachoroidal space

Clinically tested in >1200 suprachoroidal injections

- 8 clinical trials completed
- Injections performed across multiple retinal disorders

Safety profile comparable to intravitreal injections[1]

- No Serious Adverse Events (SAEs) involving lens injury, suprachoroidal hemorrhage, or endophthalmitis have been observed

6 clinical trials ongoing including partner programs

Sources: Clearside data on file | [1]Kurup, et. al, Macula Society 2021 *Safety of the Suprachoroidal Injection Procedure Utilizing SCS Microinjector® across Three Retinal Disorders*

XIPERE™: First FDA Approved Suprachoroidal Therapy Establishes Foundation for Small Molecule Suspension Pipeline

XIPERE®
(triamcinolone acetonide injectable suspension) 40 mg/mL

- Macular edema is the leading cause of vision loss in patients with non-infectious uveitis
- Commercialization and development partnerships With Bausch + Lomb and Arctic Vision to enhance value and expand patient access
- NDA approved on October 22, 2021;
- Launched Q1 2022 in US by Bausch + Lomb

First approved therapeutic delivered into the suprachoroidal space

First therapy for macular edema associated with uveitis

First commercial product developed by Clearside

First trial for uveitic macular edema using visual acuity change as a primary endpoint*

XIPERE® (triamcinolone acetonide injectable suspension), for suprachoroidal use has received U.S. FDA Approval. Please see Important Safety Information for XIPERE in the Full Prescribing Information: https://www.bauschhealth.com/Portals/25/Pdf/PI/XIPERE-PI.pdf. | *Clearside's Phase 3 PEACHTREE Trial

Pioneers in the Suprachoroidal Space (SCS®) with Patented Technology

KEY INTELLECTUAL PROPERTY COMPONENTS

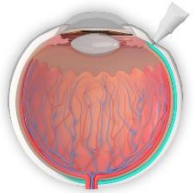
1. Comprehensive IP portfolio that includes protection of: SCS delivery technology, proprietary SCS Microinjector, treatment of various conditions with SCS administration of therapeutic products
2. 24 U.S. and >50 European and International issued patents with multiple pending patent applications
3. Granted patents provide exclusivity for our delivery technology and product candidates to mid-2030s with pending applications potentially extending exclusivity beyond 2040

DEVICE PATENTS

- SCS Microinjector® features
- Methods of using SCS Microinjector for drug delivery
- Device using an adjustable needle

DRUG PATENTS

- Administration of any drug to the suprachoroidal space by microinjection
- Administration of any drug to the eye by inserting a microinjector into the sclera

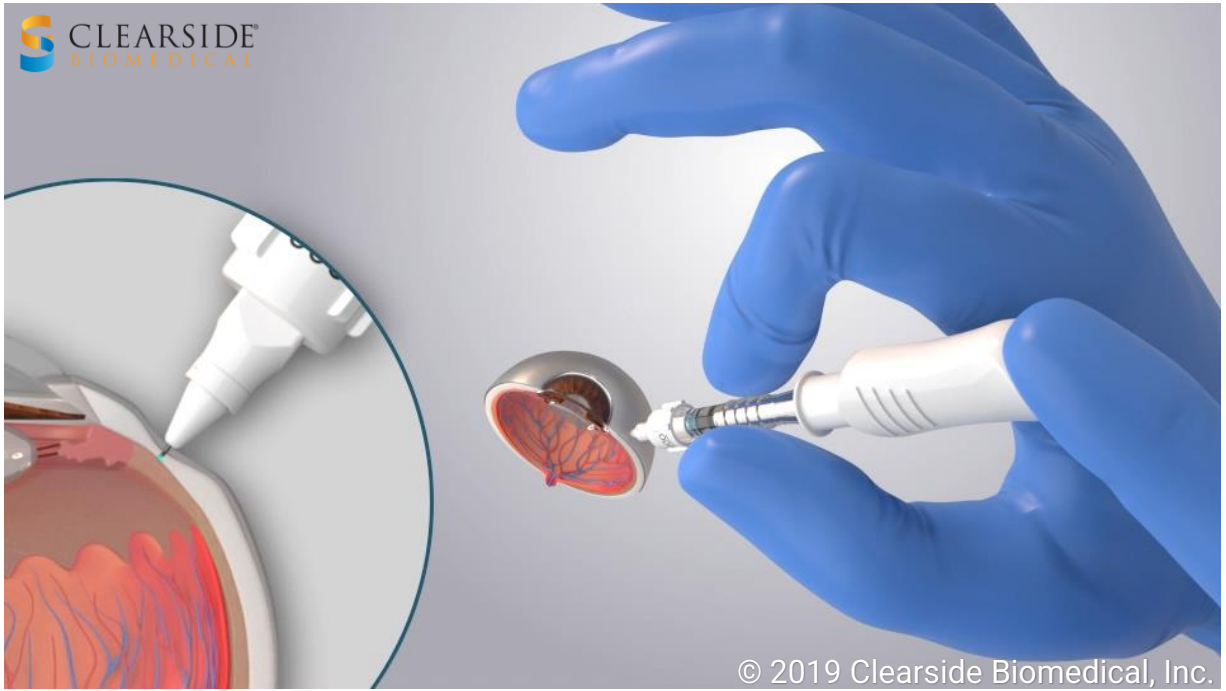


DISEASE PATENTS

- Methods of treating posterior ocular disorders by SCS administration

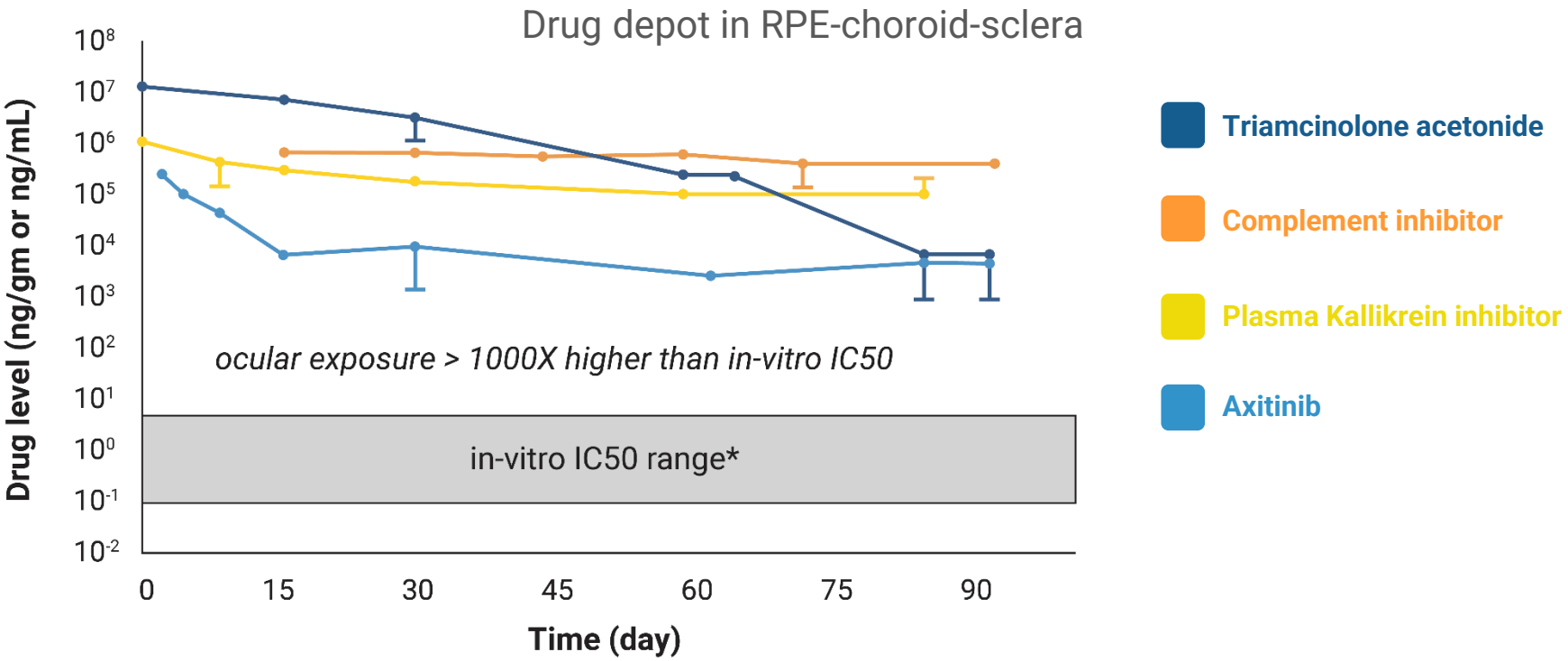
Suprachoroidal Delivery via SCS Microinjector®

Exclusive Access to the Back of the Eye Using Clearside's Proprietary SCS Microinjector®



CLS-AX Delivered with SCS Microinjector® for Wet AMD

Preclinical Data Supports Durability Potential of Small Molecule Suspensions Delivered into the Suprachoroidal Space

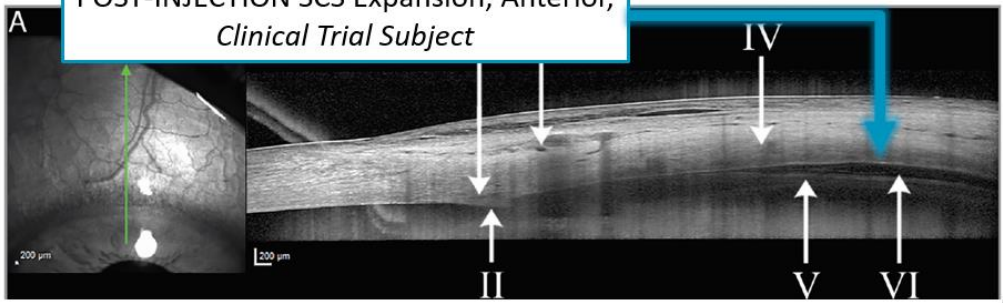


Sources for in-vitro IC50 range*: Stellato et al. *J Allergy Clin Immol.* 1999 volume 104, number 3, part 1 | Yuan et al. *Haematologica* 2017 Mar, 102(3) 466-475 | Inlyta, EMA 2012 May; CHMP assessment report | 2014 R13 HAE conference, Che, Wilson, Babu, Preclinical Characterization of BCX4161, an oral plasma kallikrein inhibitor, for the treatment of Hereditary Angioedema.

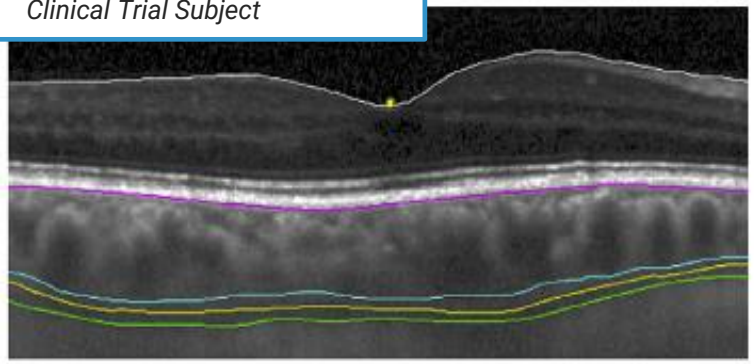
SCS Microinjector Expands the SCS Circumferentially and Posteriorly to Deliver Drugs to the Macula

- A natural pressure gradient exists such that IOP > Anterior SCS Pressure > Posterior SCS Pressure
  - This gradient drives injectate towards the lower pressured posterior SCS
- OCT images demonstrate expansion of the SCS after injection, including the macula SCS in humans
- Suprachoroidally injected drug levels are similar peripherally and centrally in the retina and SCS in a preclinical model

POST-INJECTION SCS Expansion, Anterior, *Clinical Trial Subject*



POST INJECTION SCS Expansion, Posterior, *Clinical Trial Subject*



Sources: Lampen SIR, Khurana RN, Noronha G, Brown DM, Wykoff CC. Suprachoroidal Space Alterations Following Delivery of Triamcinolone Acetonide: Post-Hoc Analysis of the Phase 1/2 HULK Study of Patients With Diabetic Macular Edema. Ophthalmic Surg Lasers Imaging Retina. 2018;49(9):692-697. doi:10.3928/23258160-20180831-07,| Kansara VS, Cooper M, Sesenoglu-Laird O, Muya L, Moen R, Ciulla TA. Suprachoroidally Delivered DNA Nanoparticles Transfect Retina and Retinal Pigment Epithelium/Choroid in Rabbits. Transl Vis Sci Technol. 2020;9(13):21. Published 2020 Dec 15. doi:10.1167/tvst.9.13.21 | Leroy Muya, Viral Kansara, Thomas Ciulla; Pharmacokinetics and Ocular Tolerability of Suprachoroidal CLS-AX (axitinib injectable suspension) in rabbits. Invest. Ophthalmol. Vis. Sci. 2020;61(7):4925 | Emi K, Pederson JE, Toris CB. Hydrostatic pressure of the suprachoroidal space. Invest Ophthalmol Vis Sci. 1989;30(2):233-238. Willoughby et al., Choroidal Changes After SuprachoroidalInjection of Triamcinolone Acetonide in EyesWith Macular Edema Secondary to Retinal VeinOcclusion, American Journal of Ophthalmology, Feb 2018.

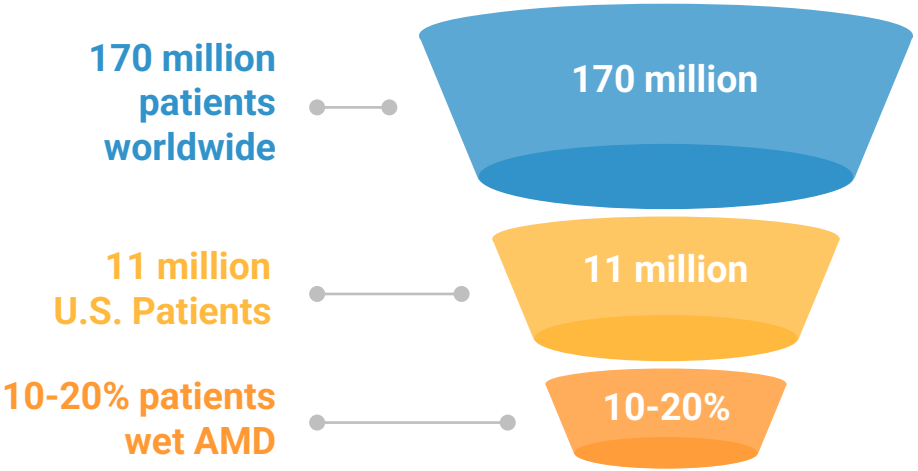
CLS-AX

(axitinib injectable suspension)

for Suprachoroidal Injection

Age-Related Macular Degeneration (AMD)

A large and growing market opportunity



- AMD causes a progressive loss of central vision and is the most common cause of blindness in individuals over age 55
  - Neovascular or Wet AMD accounts for the majority of blindness
- U.S. prevalence expected to increase to 22 million by the year 2050
- Global prevalence expected to increase to 288 million by the year 2040
- Current treatments require frequent injections causing reduced compliance
  - Under-treatment contributes to limited outcomes

Sources: Medscape: F Ryan Prall, MD, et al Assistant Professor of Ophthalmology, Indiana University School of Medicine | Pennington, Katie L and DeAngelis, Margaret M Eye and Vision, Epidemiology of age-related macular degeneration (AMD): associations with cardiovascular disease phenotypes and lipid factors , Dec 22, 2016.

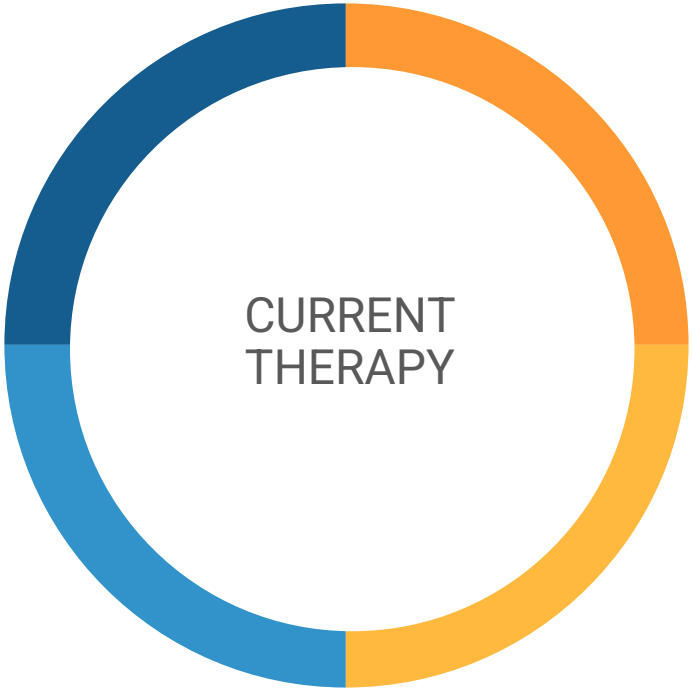
Current Wet AMD Therapies Lead to Under-Treatment and Limited "Real-World" Clinical Outcomes

LIMITED OUTCOMES WITH CURRENT REGIMENS

With on-label anti-VEGF dosing, at 1 year[1-3]:
~1/5 of patients lose BCVA
~1/2 do not achieve ≥ 20/40
~2/3 do not gain ≥ 3 lines BCVA

CEILING OF EFFICACY

In clinical trials, more intensive anti-VEGF regimens or dosage yield no additional BCVA benefit[1,6,7]



TREATMENT BURDEN

On-label dosing involves fixed frequent injections

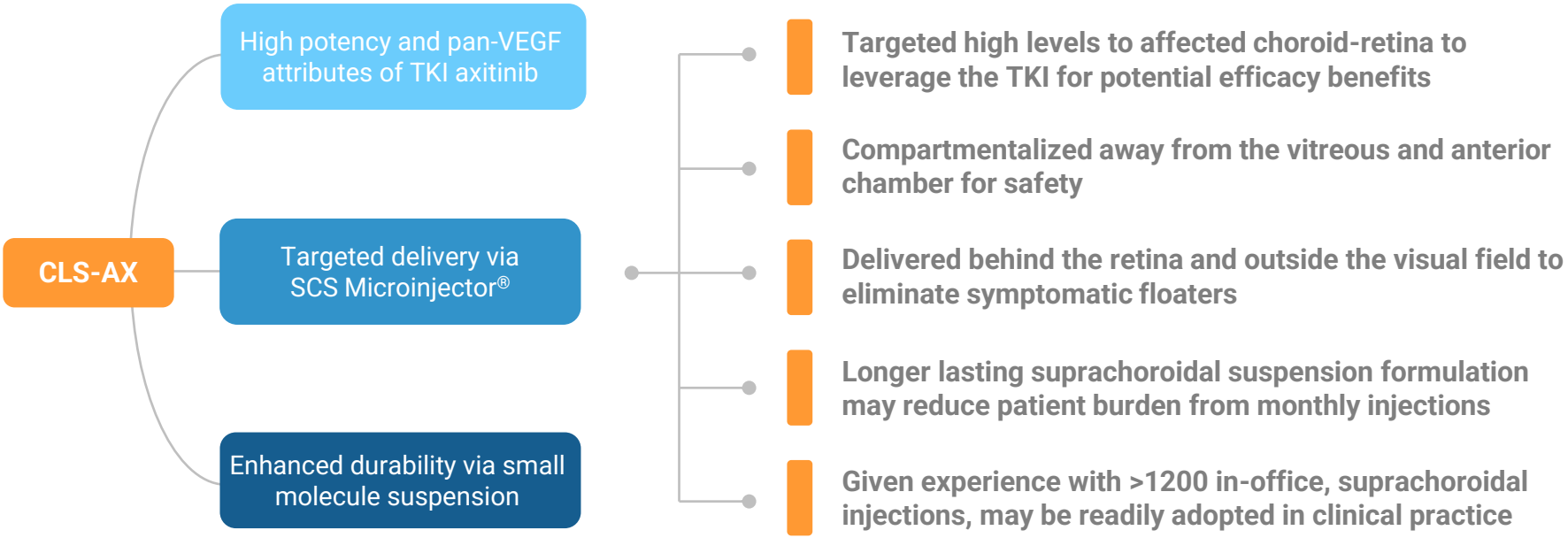
UNDERTREATMENT AND LIMITED REAL-WORLD OUTCOMES

In clinical practice, patients cannot maintain intensive on-label dosing and are undertreated, improving by only 1-3 letters at 1 year[4,5]

Sources: 1. Heier JS et al. *Ophthalmology.* 2012;119:2537-2548. | 2. Brown DM et al. Ophthalmology. 2009;116:57-65.e5. | 3. Rosenfeld PJ et al. N Engl J Med. 2006;355:1419-1431. | 4. Ciulla TA et al. Ophthalmology Retina. 2019 May 25. pii: S2468-6530(19)30280-5. | 5. Rao P, Lum F, Wood K, et al. Ophthalmology. 2018;125:522e528. | 6. Busbee BG et al. Ophthalmology. 2013;120:1046-1056. | 7. Schmidt-Erfurth U et al. Ophthalmology. 2014;121:193-201.

CLS-AX (axitinib injectable suspension) for Suprachoroidal Use

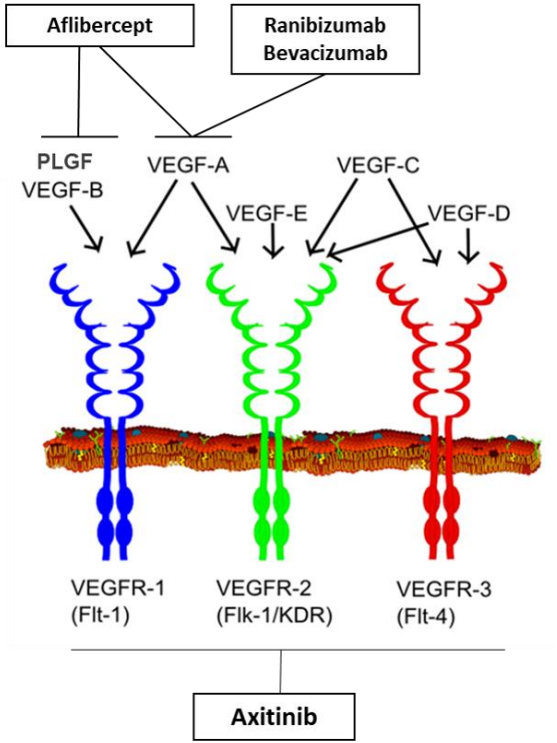
Potential to improve the treatment landscape for wet AMD patients



Axitinib is a tyrosine kinase inhibitor (TKI)

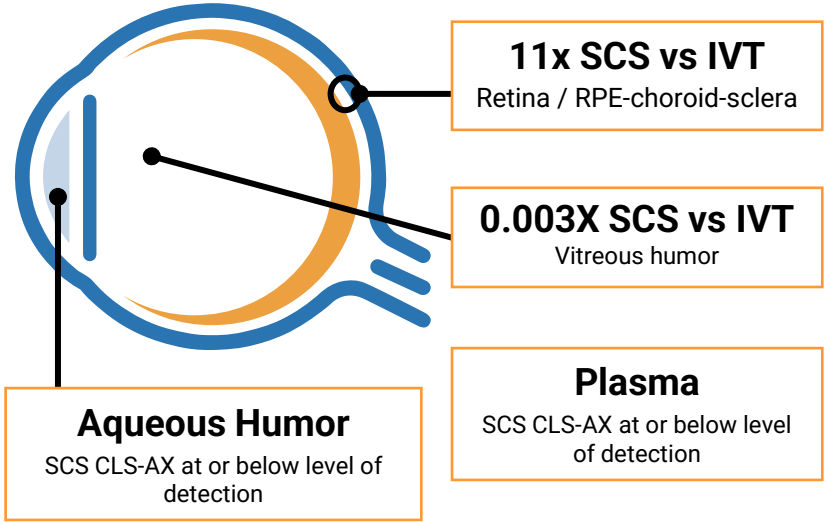
Axitinib: a Highly Potent, Pan-VEGF TKI to Treat Wet AMD

- Axitinib's intrinsic pan-VEGF inhibition through receptor blockade
  - Approved treatments are focused VEGF-A inhibitors
- Inhibits **VEGFR-1**, **VEGFR-2**, **VEGFR-3** receptors
  - More effective than anti-VEGF-A in *in-vitro* angiogenesis model[1-2]
- Highly potent tyrosine kinase inhibitor (TKI)
  - >10x more potent than other TKIs in preclinical studies
  - Better ocular cell biocompatibility than other TKIs[3]
  - More effective than other TKIs for experimental corneal neovascularization in preclinical models
- Preclinical data showed axitinib inhibition and regression of angiogenesis



Sources: 1. Cabral T et al. Bevacizumab Injection in Patients with Neovascular Age-Related Macular Degeneration Increases Angiogenic Biomarkers. Ophthalmol Retina. 2018 January ; 2(1): 31–37. doi:10.1016/j.oret.2017.04.004. | 2. Lieu et al. The Association of Alternate VEGF Ligands with Resistance to Anti-VEGF Therapy in Metastatic Colorectal Cancer. PLoS ONE 8(10): e77117. | 3. Theile et al. Multikinase Inhibitors as a New Approach in Neovascular Age-Related Macular Degeneration (AMD) Treatment: In Vitro Safety Evaluations of Axitinib, Pazopanib and Sorafenib for Intraocular Use. Klin Monatsbl Augenheilkd 2013; 230: 247-254. | Image by Mikael Häggström, used with permission. Häggström, Mikael (2014). "Medical gallery of Mikael Häggström 2014". WikiJournal of Medicine 1 (2). DOI:10.15347/wjm/2014.008. ISSN 2002-4436. Public Domain.

Suprachoroidal Injection of CLS-AX Provides Targeted Delivery Relative to Intravitreal Injection at Same Dose



11x SCS vs IVT
Retina / RPE-choroid-sclera

0.003X SCS vs IVT
Vitreous humor

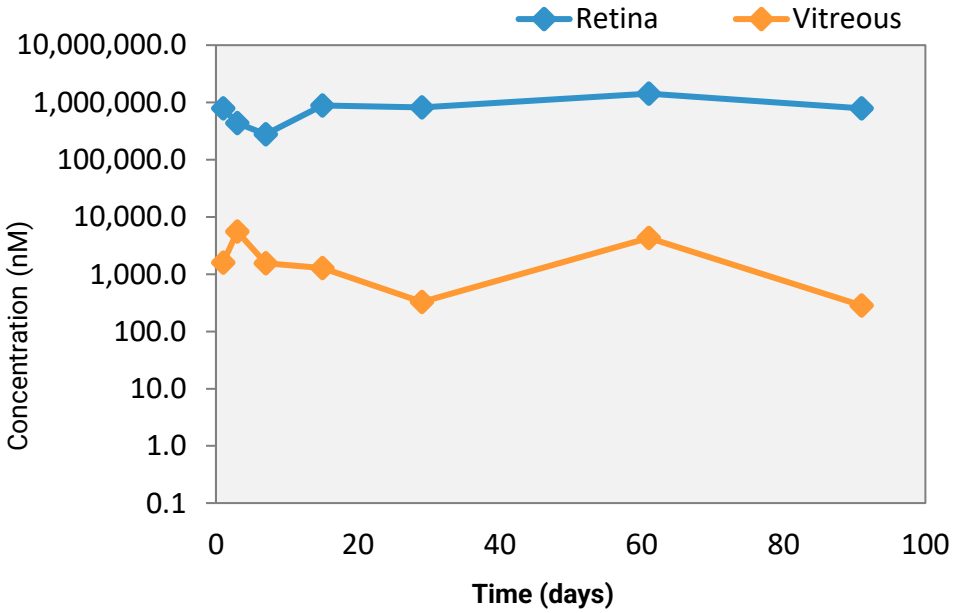
Plasma
SCS CLS-AX at or below level of detection

Aqueous Humor
SCS CLS-AX at or below level of detection

Rabbit Model
Values: area under the curve ratios, SCS / IVT
SCS : 1 mg/eye, 100 µL. | IVT: 1 mg/eye, 25 µL
Single bilateral injection, 1-wk rabbit PK studies

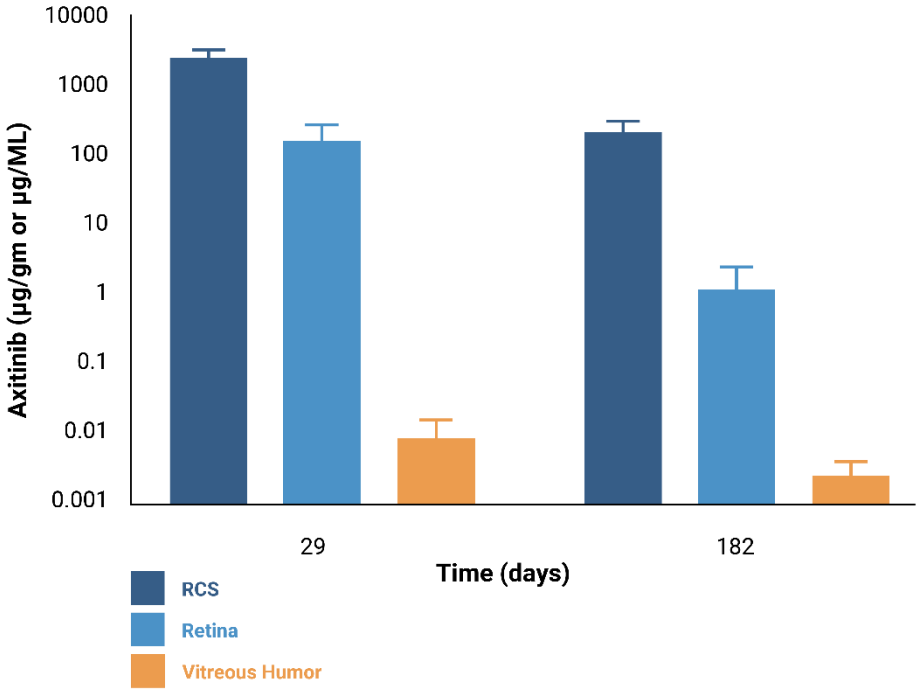
CLS-AX: High, Sustained Drug Levels in the Retina after SCS Administration

High Retina Levels: Sufficient to block VEGF pathway
Low Plasma Levels: <1 ng/mL



CLS-AX has Potential for Meaningful Durability

Therapeutic Levels > IC50 for 6 months after 1.05 mg/eye SCS Injection in Rabbits



Rabbit toxicology study with single bilateral suprachoroidal injection of axitinib, 1.05 mg/eye (n=4 eyes/ timepoint)

- On day 182, mean axitinib levels in the RPE-choroid-sclera (199 µg/gm) and in the retina (1.1 µg/gm) were 3-5 log orders higher than the in-vitro IC50 value (0.2 ng/mL, VEGFR2 autophosphorylation inhibition assay).
- Based on this IC50 value, therapeutic levels were achieved in the RPE-choroid-sclera and retina for 6 months after a single suprachoroidal injection of axitinib in rabbits.

Sources: Viral S. Kansara, Leroy W. Muya, Thomas A. Ciulla; Evaluation of Long-Lasting Potential of Suprachoroidal Axitinib Suspension Via Ocular and Systemic Disposition in Rabbits. *Trans. Vis. Sci. Tech.* 2021;10(7):19. doi:
Abbreviations: RCS: RPE-choroid-sclera| | RPE: Retinal pigment epithelium

OASIS: CLS-AX Phase 1/2a Clinical Trial in Wet AMD

TRIAL DESIGN AND OBJECTIVES

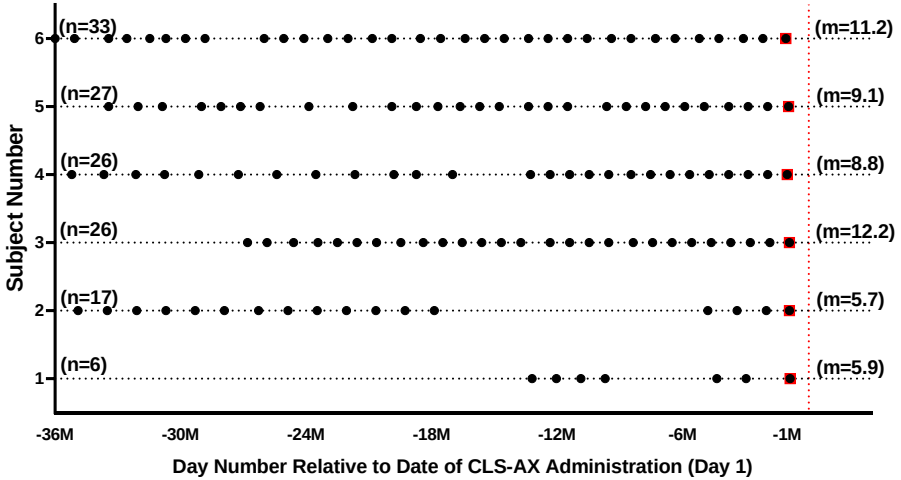
- Open-label study with a primary endpoint to evaluate safety and tolerability of escalating single doses of CLS-AX administered through suprachoroidal injection following IVT aflibercept
- 4 Cohorts with a total of 27 patients
- Dose-escalation of CLS-AX (in mg): Cohort 1 at 0.03; Cohort 2 at 0.10; Cohort 3 at 0.50; Cohort 4 at 1.0
- Secondary endpoints: visual function, ocular anatomy, and need for additional treatment
- Assessment for additional treatment with aflibercept: loss from best measurement of ≥10 letters in BCVA with exudation; increase in CST >75 microns; a vision-threatening hemorrhage

Note: aflibercept is dosed via intravitreal injection (IVT); CLS-AX is dosed via suprachoroidal injection | clinicaltrials.gov NCT# 04626128

Anti-VEGF Treatments up to 3 Years Prior to Screening

Highly treatment experienced, chronic patients enrolled in Cohorts 1 & 2

COHORT 1: 0.03 mg

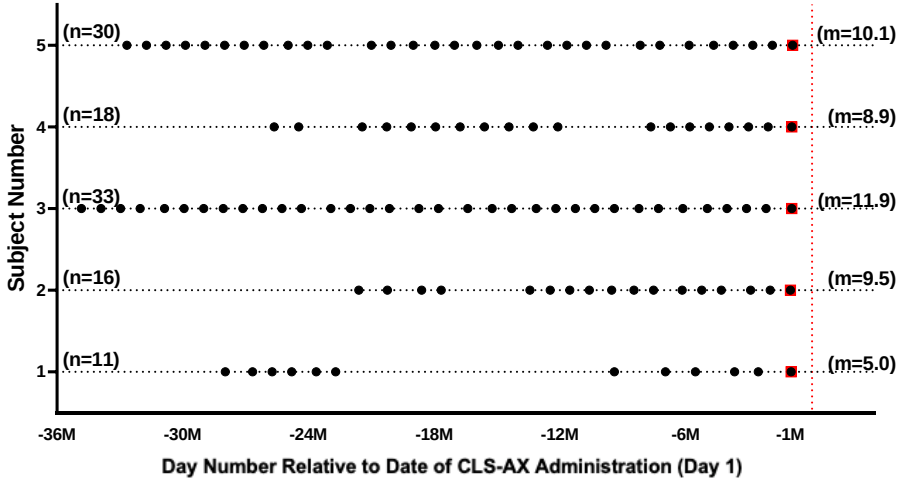


● Prior wAMD Treatment ■ IVT Aflibercept (Screening, Visit 1)

(n=) Total number of wAMD treatments prior to Screening

(m=) Mean number of wAMD treatments prior to Screening per year

COHORT 2: 0.10 mg



● Prior wAMD Treatment ■ IVT Aflibercept (Screening, Visit 1)

(n=) Total number of wAMD treatments prior to Screening

(m=) Mean number of wAMD treatments prior to Screening per year

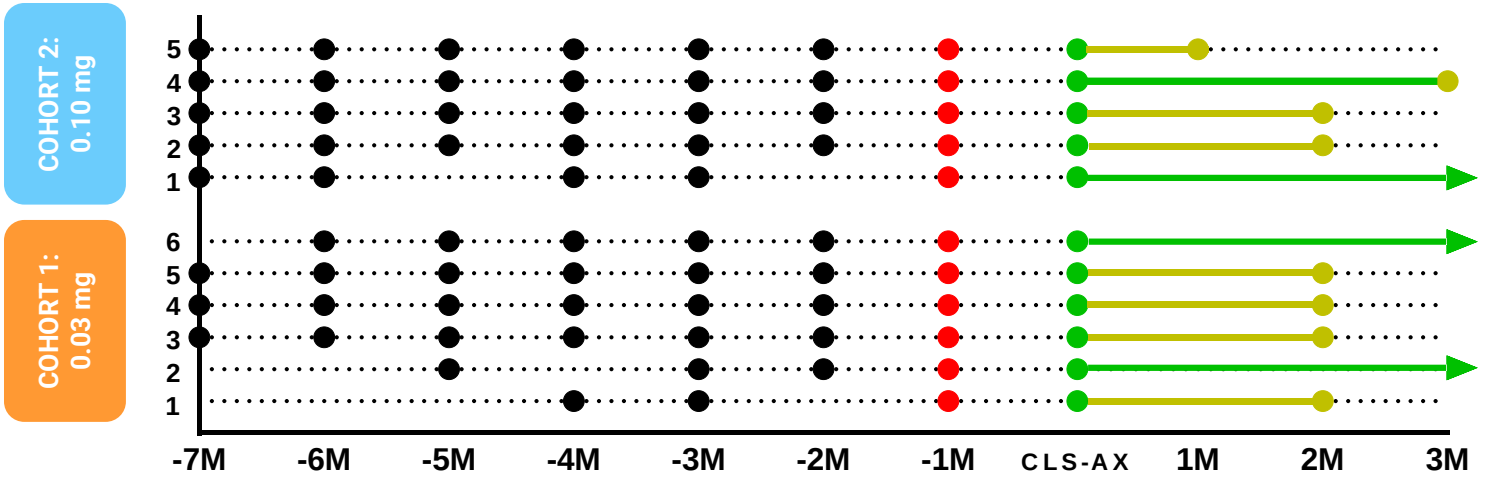
Enrolling Anti-VEGF Sub-Responders with Active*, Chronic Disease

Inclusion of difficult-to-treat patients supports dose selection and mitigates risk in Phase 2b

CHARACTERISTICS	COHORT 1: 0.03mg (N=6)	COHORT 2: 0.10mg (N=5)
No. of participants	6	5
Mean age (range), years	81.8 (66-93)	78.2 (65-90)
Women, no. (%)	2 (33.3)	3 (60.0)
Total mean number of wAMD treatments prior to screening (range)	25.8 (6-40)	23.2 (11-38)
Mean baseline best corrected visual acuity (range), letters	59.0 (29-74)	65.6 (52-75)
Mean central subfield retinal thickness (range), µm	231.2 (208-294)	209.4 (184-227)
Mean total lesion area (range), mm2	6.252 (3.58-9.58)	7.712 (1.06-18.02)

**Active disease verified by independent reading center*

6 Month Prior Anti-VEGF Therapies and Time to Additional Therapy



- SC CLS-AX injection
- IVT Aflibercept injection
- Anti-VEGF injection prior to study entry
- Additional IVT anti-VEGF injection

Time to Additional Therapy	Number (%) of Participants
≥ 3 months	4 (36.4%)
2 months	6 (54.5%)
1 month	1 (9.1%)

Source: ADLS (CLSD ADaM), ADPTRT (CLSD ADaM), ADRM (CLSD ADaM)

Reason for Retreatment

COHORT	SUBJECT	RETREATMENT VISIT	REASON FOR RETREATMENT
COHORT 1: 0.03 mg (N=6)	5	2 months post CLS-AX	BCVA
	4	2 months post CLS-AX	CST
	3	2 months post CLS-AX	CST
	1	2 months post CLS-AX	BCVA
COHORT 2: 0.10 mg (N=5)	5	1 month post CLS-AX	CST – retreatment criteria not met according to independent reading center
	4	3 months post CLS-AX	BCVA
	3	2 months post CLS-AX	Hemorrhage – no hemorrhage observed by the independent reading center; retreatment criteria not met
	2	2 months post CLS-AX	CST – retreatment criteria not met according to independent reading center

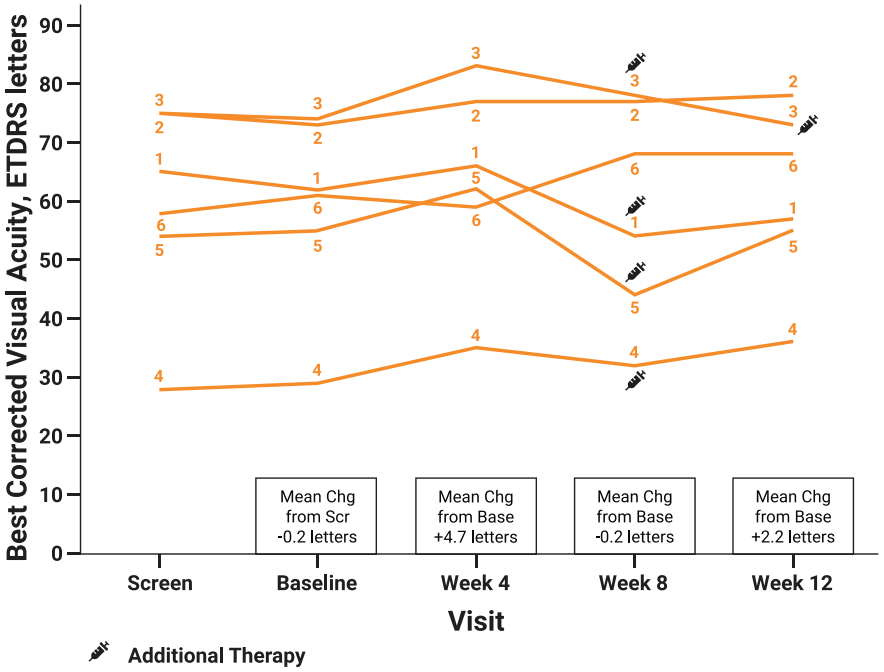
Protocol based Assessment for additional aflibercept treatment:

- loss from best measurement of ≥10 letters in BCVA with exudation
- increase in CST >75 microns
- a vision-threatening hemorrhage

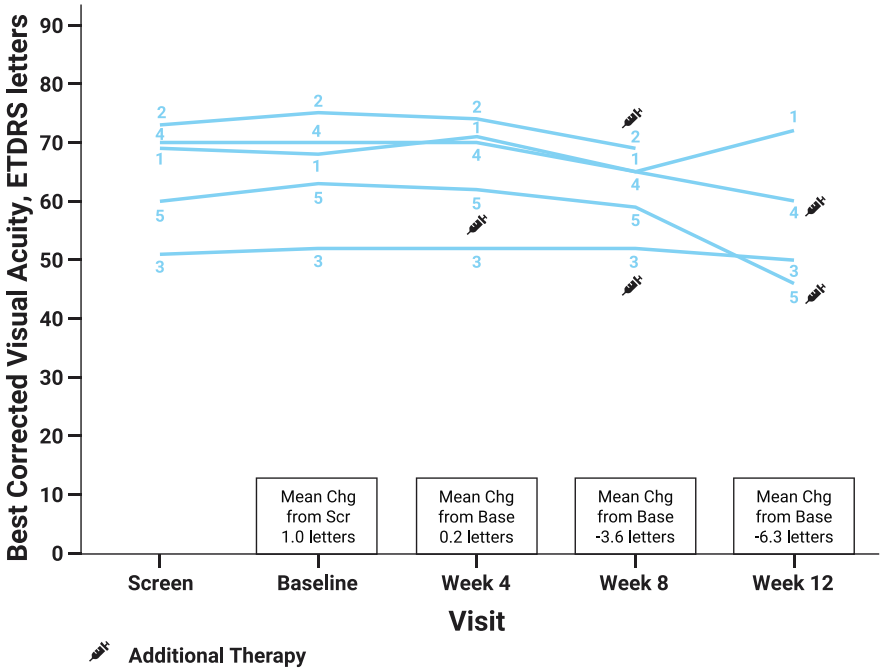
Source: Clearside data on file.

Individual Best Corrected Visual Acuity Letter Score, by Visit

COHORT 1: 0.03 mg

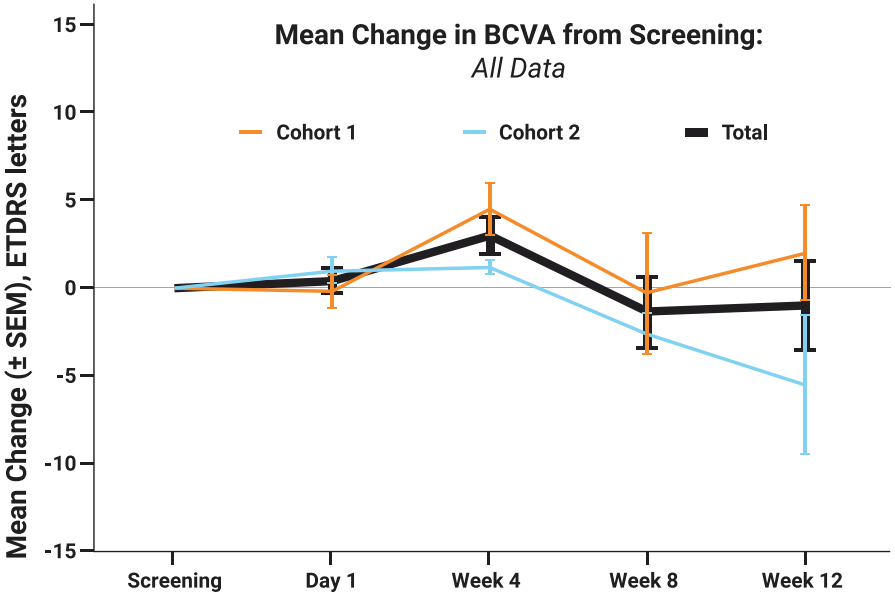


COHORT 2: 0.10 mg

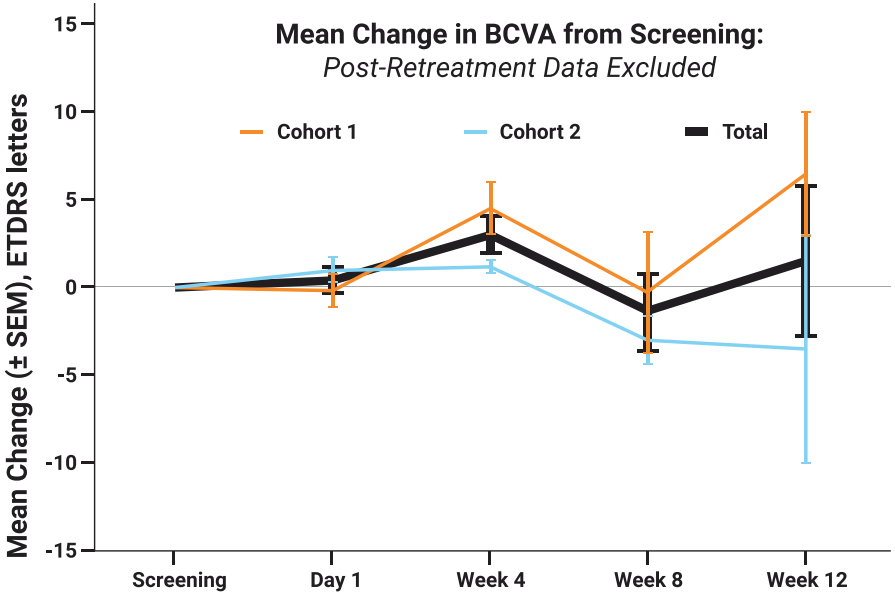


Source: Clearside data on file.

Mean Best Corrected Visual Acuity Letter Score, Change from Screening



Cohort	Screening	Baseline	Week 4	Week 8	Week 12
Cohort 1, n	6	6	6	6	6
Cohort 2, n	5	5	5	5	4*

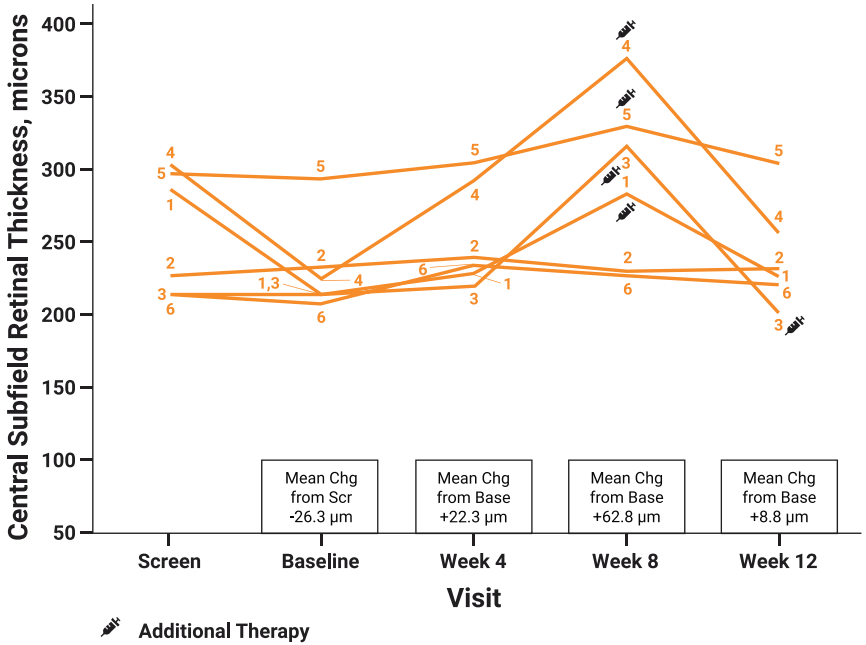


Cohort	Screening	Baseline	Week 4	Week 8	Week 12
Cohort 1, n	6	6	6	6	2
Cohort 2, n	5	5	5	4	2

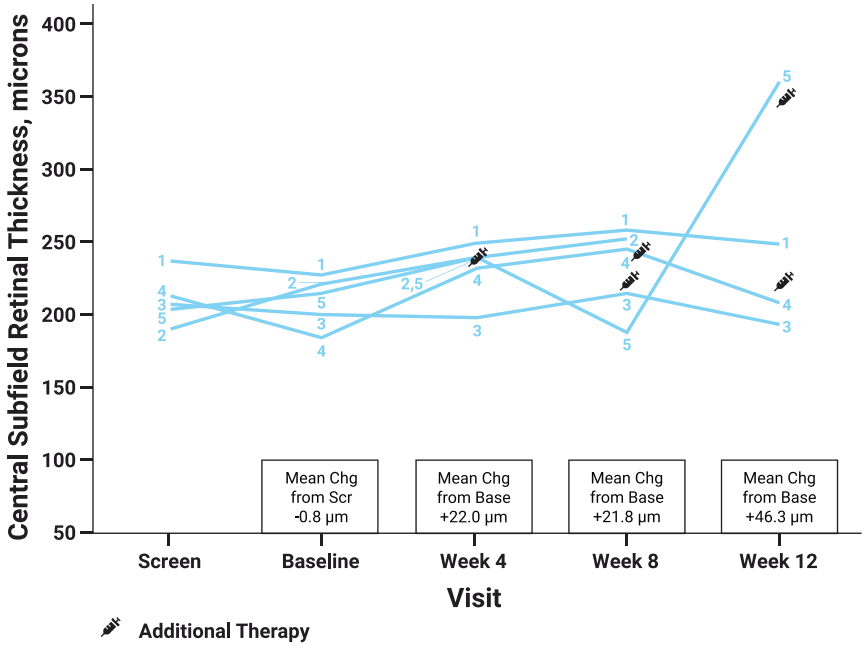
*Cohort 2 subject 2 discontinued after receiving additional therapy | Source: Clearside data on file.

Individual Central Subfield Thickness, by Visit

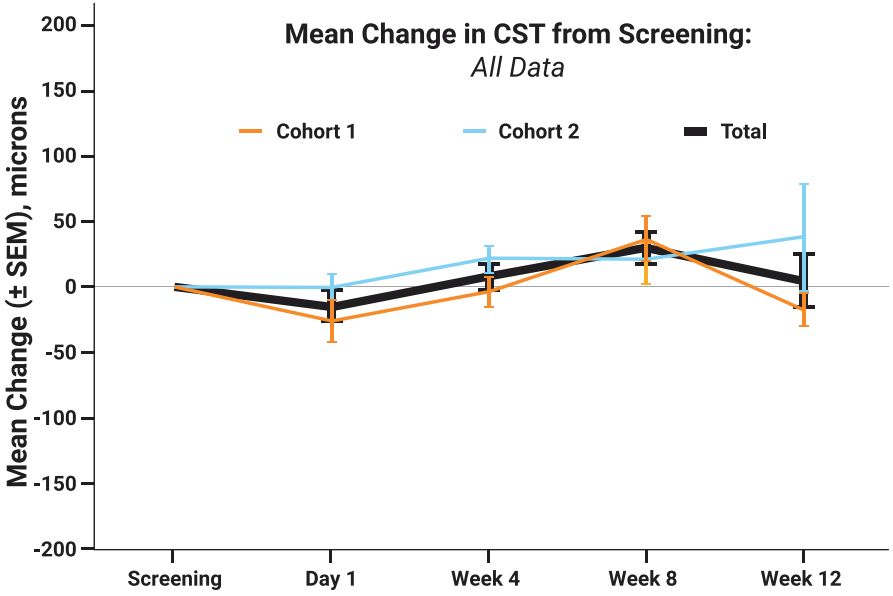
COHORT 1: 0.03 mg



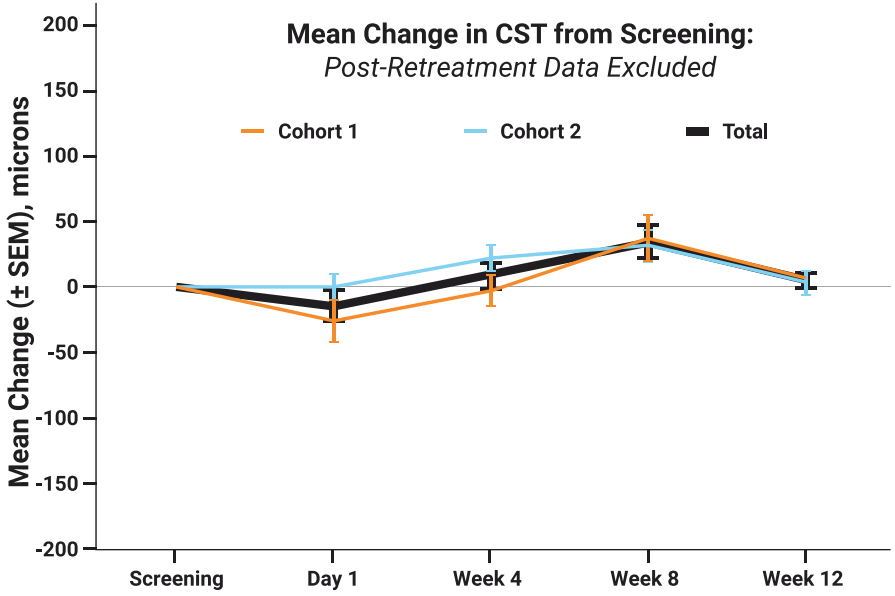
COHORT 2: 0.10 mg



Mean Change Central Subfield Thickness, Change from Screening



Cohort	Screening	Baseline	Week 4	Week 8	Week 12
Cohort 1, n	6	6	6	6	6
Cohort 2, n	5	5	5	5	4*



Cohort	Screening	Baseline	Week 4	Week 8	Week 12
Cohort 1, n	6	6	6	6	2
Cohort 2, n	5	5	5	4	2

*Cohort 2 subject 2 discontinued after receiving additional therapy | Source: Clearside data on file.

OASIS Cohorts 1 & 2 Results Supported Advancing to Higher Dosing

SAFETY

- CLS-AX well tolerated with no dose limiting toxicities
- No dispersion of investigational product into the vitreous
- No adverse events related to intraocular pressure (IOP), inflammation, or vasculitis

ANATOMIC EFFECTS

- Stable disease activity (based on CST), on average, over three months even after excluding patients who were retreated

VISUAL ACUITY

- Stable visual acuity, on average, over three months even after excluding patients who were retreated

DURABILITY

Post CLS-AX in Heavily Pre-Treated Patients

- 4/11 (36%) of patients did not require additional therapy for ≥ 3 months
- 6/11 (55%) of patients did not require additional therapy for 2 months
- 1/11 (9%) patient was retreated at 1 month

OASIS CURRENT STATUS

Total enrollment of n=27 patients

- Cohort 3 enrolled with n=8 patients at a dose of 0.50 mg CLS-AX
- Cohort 4 enrolled with n=8 patients at a dose of 1.0 mg CLS-AX

Endpoints

- Primary endpoints: safety and tolerability of escalating single doses of CLS-AX administered through suprachoroidal injection following IVT aflibercept
- Secondary endpoints: visual function, ocular anatomy, and need for retreatment per protocol

Full OASIS Data Set Expected in November 2022

Note: aflibercept is dosed via intravitreal injection (IVT); CLS-AX is dosed via suprachoroidal injection | clinicaltrials.gov NCT# 04626128

Strategic SCS Collaboration Pipeline

Suprachoroidal Space (SCS®) Injection Platform

Internal Development Pipeline

PROGRAM	THERAPEUTC ENTITY	INDICATION	RESEARCH	PRECLINICAL	PHASE 1/2	PHASE 3
CLS-AX (axitinib)	Small Molecule	Wet AMD	Fully Enrolled		OASIS	
CLS-301 (integrin inhibitor)	Small Molecule	Diabetic Macular Edema (DME)				
GENE THERAPY	Non-Viral & Viral Vectors	Open to Partnering				

SCS Microinjector® Partner Programs

PARTNER	THERAPEUTC ENTITY	LICENSED INDICATION	IND-Enabling	PHASE 2	PHASE 3	APPROVAL
REGENXBIO	AAV-based Gene Therapy	Wet AMD (AAVIATE)				
REGENXBIO	AAV-based Gene Therapy	Diabetic Retinopathy (ALTITUDE)				
AURA BIOSCIENCES	Viral-like Drug Conjugate	Ocular Oncology/Choroidal Melanoma				

XIPERE® Commercial Partners

PARTNER	INDICATION	LICENSED TERRITORY	PRE-CLINICAL	PHASE 1	PHASE 2	PHASE 3	APPROVAL
BAUSCH + LOMB	Uveitic Macular Edema	U.S. & Canada	U.S.A.				
ARCTIC VISION	Uveitic Macular Edema	Greater China, South Korea, ASEAN Countries, India, Australia, New Zealand	Arcatus™				
	Diabetic Macular Edema		Arcatus™				

CLEARSIDE BIOMEDICAL

XIPERE® (triamcinolone acetonide injectable suspension), for suprachoroidal use has received U.S. FDA Approval | In China, Arctic Vision is developing Arcatus™ (triamcinolone acetonide injectable suspension), formerly referred to as ARVN001, and known as XIPERE in the U.S.

Enabling SCS Delivery of AAV Gene Therapy for Retinal Disease

THE OPPORTUNITY: GENE THERAPY FOR RETINAL DISEASES

- Exclusive worldwide rights to our SCS Microinjector for delivery of adeno-associated virus (AAV)-based therapeutics to the suprachoroidal space to treat wet AMD, diabetic retinopathy and certain other conditions for which anti-VEGF treatment is the standard of care
- Two ongoing multi-center, open-label, randomized, controlled, dose-escalation studies evaluating the efficacy, safety and tolerability of suprachoroidal delivery of RGX-314
- Delivery of gene therapy through the SCS may provide a targeted, in-office, non-surgical treatment approach option
- **First data ever presented utilizing gene therapy delivered into the suprachoroidal space**
- THE TERMS:
  - Up to $136M in regulatory, development and sales milestones across certain VEGF mediated retinal diseases
  - Mid single digit royalties on net sales of SCS Microinjector products

Two Phase 2 Trials Using Clearside's SCS Microinjector®

AAVIATE: RGX-314 in wet AMD

- Cohorts 1-3: Suprachoroidal delivery well tolerated in 50 patients with no drug-related SAEs
- **Cohort 1: Positive interim efficacy data (Q4 2021)**
- **Cohort 2: Positive interim efficacy data (Q4 2021)**
  - Treatment effect observed with stable visual acuity and retinal thickness
  - Demonstrated meaningful reduction (>70%) in anti-VEGF treatment burden; 40% of patients were anti-VEGF injection-free
- Cohort 3 & Cohort 5: neutralizing antibody (NAb) positive patients
- Cohorts 4 and 5 at a higher dose
- No prophylactic immune suppressive corticosteroid therapy

ALTITUDE: RGX-314 in Diabetic Retinopathy

- **Enrollment Completed**
- **Cohort 1: Positive Interim data (Q1 2022)**
  - Suprachoroidal delivery well tolerated in 15 patients in Cohort 1 with no drug-related SAEs at 6 months
  - No intraocular inflammation observed
  - 47% of patients demonstrated a ≥2 step improvement from baseline on the ETDRS-DRSS at six months, compared to 0% of patients in observational control; increase from 33% of patients at three months
  - Stable mean change in BCVA of +0.3 letters compared to baseline at 6 months
- Cohort 3 enrolled NAb positive patients
- No prophylactic immune suppressive corticosteroid therapy

Enabling SCS Drug Delivery for Ocular Oncology

THE OPPORTUNITY: OCULAR ONCOLOGY

- Worldwide licensing agreement for the use of our SCS Microinjector to deliver their proprietary drug candidates into the SCS for the potential treatment of certain ocular cancers, including choroidal melanoma
- Non-surgical alternative to intravitreal delivery of Aura's oncology drug candidates via our SCS Microinjector
- Choroidal melanoma is the most common, primary intraocular tumor in adults
- THE TERMS:
  - Up to $21M in regulatory and development milestones
  - Low to mid single digit royalties on net sales of SCS Microinjector products

AU-011 PHASE 2 CLINICAL TRIAL

- Evaluate Safety and Efficacy of AU-011 Via Suprachoroidal Administration in Subjects With Primary Indeterminate Lesions and Small Choroidal Melanoma
- **Preliminary results indicate a positive safety and tolerability profile**: No treatment related SAEs, dose limiting toxicities, or grade 3/4 AEs reported
- Cohorts 1-5: Fully enrolled (n=14)
- Cohort 6: Enrolling

XIPERE: Two Global Commercialization & Development Partners

XIPERE® (triamcinolone acetonide injectable suspension) 40 mg/mL

BAUSCH + LOMB

- License for the U.S. and Canada
- Received $20M in upfront, U.S. approval and pre-launch milestones
- Up to $57M in milestone payments
- Tiered royalties from the high-teens to 20%

arctic VISION

- License for Greater China, South Korea, ASEAN Countries, India, Australia, New Zealand
- Received $11M in upfront and U.S. approval payments
- Up to $33M in additional approvals, development and sales milestones
- Tiered royalties of 10% to 12%

Four Validating Partnerships to Drive Growth

VALIDATION: Validates our investment in suprachoroidal delivery using our SCS Microinjector

OPPORTUNITY: Maximizes the commercial and development opportunities for XIPERE in multiple geographic markets

EXPANSION: Expands our overall internal and collaborative product development pipeline

NON-DILUTIVE FUNDING: potential development and sales milestones, and potential royalties to fund our internal R&D pipeline*

*Subject to royalty financing agreement signed in August 2022

Recent Events Targeted Catalysts 2022

Non-Dilutive Royalty Financing Provides Cash Runway into 2024

FUNDING

- Upfront cash payment of $32.5M, less certain expenses
- May receive up to $65 million dollars
  - Additional $12.5M deposited in an escrow account to be released to CLSD upon attainment of a pre-specified sales milestone for XIPERE by 3/31/24
  - Eligible for additional payment of $20M to CLSD upon attainment of a second, pre-specified 2024 XIPERE sales milestone
- Provides funding into 2024

TERMS

- Funder will receive royalties and milestone payments due to CLSD from XIPERE and certain SCS Microinjector license agreements
- Repayment capped at 2.5 times total payments received by CLSD. Then CLSD will keep any future royalty and milestone payments from these agreements
- Cap may be increased under certain circumstances after 2024
- **Excludes** all internally developed assets and programs, including CLS-AX, as well as any future in-licensed assets

Targeted Catalysts in 2022

INTERNAL R&D PIPELINE

CLS-AX OASIS Phase 1/2a Clinical Trial

- ✓ **Q2:** Cohort 4 initiated
- **Q4:** Cohorts 3 & 4 data and complete OASIS analysis
- **Q4:** Cohort 2 data from 6-month extension

CLS-AX Phase 2 Clinical Trial

- **YE:** Ready for recruitment

YE 2022: Integrin Inhibitor preclinical data

Medical/Scientific meeting presentations

- ✓ **Q1 & Q2:** Angiogenesis, ARVO, Macula Society
- **Q3 & Q4:** ASRS, Retina Society, AAO

PARTNER PROGRAMS

BAUSCH + LOMB:

- ✓ XIPERE® launch in U.S. in Q1 2022

ARCTIC VISION: Arcatus™ in China

- ✓ Initiate Phase 1 trial in diabetic macular edema
- Phase 3 trial data in uveitic macular edema

REGENXBIO: RGX-314

- ✓ ALTITUDE trial in DR: Positive interim data
- Additional data from ALTITUDE & AAVIATE trial in wet AMD

AURA BIOSCIENCES: AU-011

- Additional data from Phase 2 trial in choroidal melanoma

XIPERE® (triamcinolone acetonide injectable suspension) for suprachoroidal use | In China, Arctic Vision is developing Arcatus™ (triamcinolone acetonide injectable suspension), formerly referred to as ARVN001, and known as XIPERE in the U.S. | REGENXBIO (RGNX) trials involve suprachoroidal delivery of RGX-314 using the SCS Microinjector | Aura Biosciences trials involve suprachoroidal delivery of AU-011 using the SCS Microinjector

CLEARSIDE BIOMEDICAL

Nasdaq: CLSD