

Exhibit 99.1



CLEARSIDE BIOMEDICAL

Investor Presentation

December 2024



TM

Forward-Looking Statements







This presentation contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995, as amended. The words “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “target” or the negative of these terms and other similar words or expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Clearside Biomedical, Inc.’s views as of the date of this presentation about future events and are subject to risks, uncertainties, assumptions, and changes in circumstances that may cause Clearside’s actual results, performance, or achievements to differ significantly from those expressed or implied in any forward-looking statement. Although Clearside believes that the expectations reflected in the forward-looking statements are reasonable, new risks and uncertainties may emerge from time to time, and Clearside cannot guarantee future events, results, performance, or achievements. Some of the key factors that could cause actual results to differ from Clearside’s expectations include its plans to develop and potentially commercialize its product candidates; adverse differences between preliminary or interim data and final data; Clearside’s planned clinical trials and preclinical studies for its product candidates; the timing of and Clearside’s ability to obtain and maintain regulatory approvals for its product candidates; the extent of clinical trials potentially required for Clearside’s product candidates; the clinical utility and market acceptance of Clearside’s product candidates; Clearside’s commercialization, marketing and manufacturing capabilities and strategy; Clearside’s intellectual property position; Clearside’s ability to expand its pipeline; developments and projections relating to Clearside’s competitors and its industry; the impact of government laws and regulations; the timing, design and anticipated results of Clearside’s preclinical studies and clinical trials and the risk that the results of Clearside’s preclinical studies and clinical trials may not be predictive of future results in connection with future studies or clinical trials and may not support further development and marketing approval; findings from investigational review boards at clinical trial sites and publication review bodies; Clearside’s estimates regarding future revenue, expenses, capital requirements and need for additional financing; and Clearside’s ability to identify additional product candidates with significant commercial potential that are consistent with its commercial objectives. For further information regarding these risks, uncertainties and other factors you should read the “Risk Factors” section of Clearside’s Annual Report on Form 10-K for the year ended December 31, 2023, filed with the U.S. Securities and Exchange Commission (SEC) on March 12, 2024, Clearside’s Quarterly Report on Form 10-Q filed with the SEC on November 12, 2024, and Clearside’s subsequent filings with the SEC. Clearside expressly disclaims any obligation to update or revise the information herein, including the forward-looking statements, except as required by law. This presentation also contains estimates and other statistical data made by independent parties and by Clearside relating to market size and growth and other data about its industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of Clearside’s future performance and the future performance of the markets in which Clearside operates are necessarily subject to a high degree of uncertainty and risk.

Delivering on the Potential of the Suprachoroidal Space

- ✓ **Validated Suprachoroidal Space (SCS) Delivery with Approved Product, Multiple Collaborations, and Comprehensive IP Portfolio**
- ✓ **Proven Leader in Suprachoroidal Delivery with Thousands of Injections Performed in the Clinic**
- ✓ **Differentiated SCS Clinical Program Targeting Multi-Billion Dollar Wet AMD Market**



Multiple Validating Partnerships Expand Utilization of SCS Microinjector® Technology

SCS Microinjector® Partner Clinical Development Programs								
THERAPEUTIC	TYPE	INDICATION	IND-ENABLING	PHASE 1	PHASE 2	PHASE 3	APPROVAL	PARTNER
Bel-Sar	Viral-like Drug Conjugate	Choroidal Melanoma				CoMpass		
ABBV-RGX-314	AAV Gene Therapy	Diabetic Retinopathy (DR) Diabetic Macular Edema			ALTITUDE			 
ABBV-RGX-314	AAV Gene Therapy	Wet AMD			AAVIATE			 
Avoralstat	Plasma Kallikrein Inhibitor	Diabetic Macular Edema						



Ocular Oncology

2024: Actively enrolling Phase 3



Gene Therapy

Q4 2024:

- Wet AMD: Enrolling new cohort at dose level 4
- DME: Enrolling new cohort at dose level 4

1H 2025: Initiate global pivotal trial in DR



Plasma Kallikrein Inhibitor

- **2024:** Conduct formulation and nonclinical work
- **2025:** Begin clinical trials



¹XIPERE® (triamcinolone acetate injectable suspension), for suprachoroidal use has received U.S. FDA Approval and is being commercialized by Bausch + Lomb.

²In China, Arctic Vision is responsible for clinical development of ARCATUS™ (triamcinolone acetate injectable suspension), formerly referred to as ARVN001, and known as XIPERE® in the U.S.

Core Competencies in Delivery & Formulation Drive 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. **28 U.S. and >80 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**



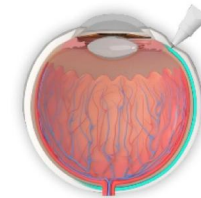
DEVICE PATENTS

- SCS Microinjector® features
- Methods of using SCS Microinjector® for drug delivery



DRUG PATENTS

- Administration of a variety of drugs to the suprachoroidal space by microinjection



DISEASE PATENTS

- Methods of treating ocular disorders by SCS administration

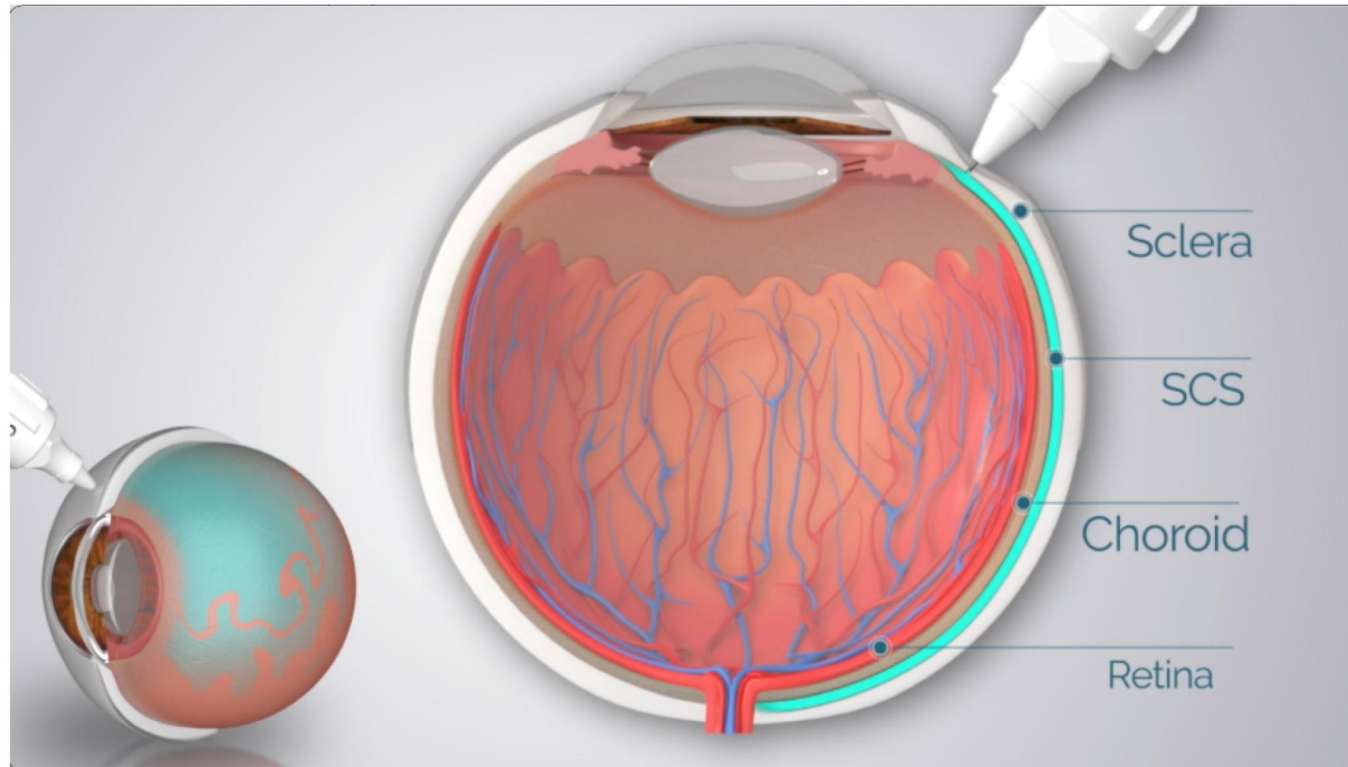
Proven Commercial Capabilities in Suprachoroidal Delivery



Suprachoroidal Delivery via SCS Microinjector[®]



Delivering on the Potential of the Suprachoroidal Space (SCS[®]): A Novel Approach to Drug Delivery Into the Back of the Eye

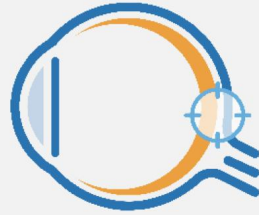


Benefits for Patients and Physicians Using SCS Microinjector[®] Delivery



Enhanced Safety

Much lower risk of endophthalmitis as direct contact to immune system vs intravitreal injection



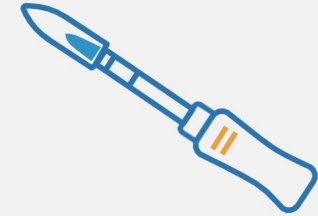
Injectate Flows to Back of the Eye

Reduced risk of floaters, snow globe effect, or other visual disturbances



No Implants or Devices in the Vitreous

Can be easily re-dosed for potentially longer durability

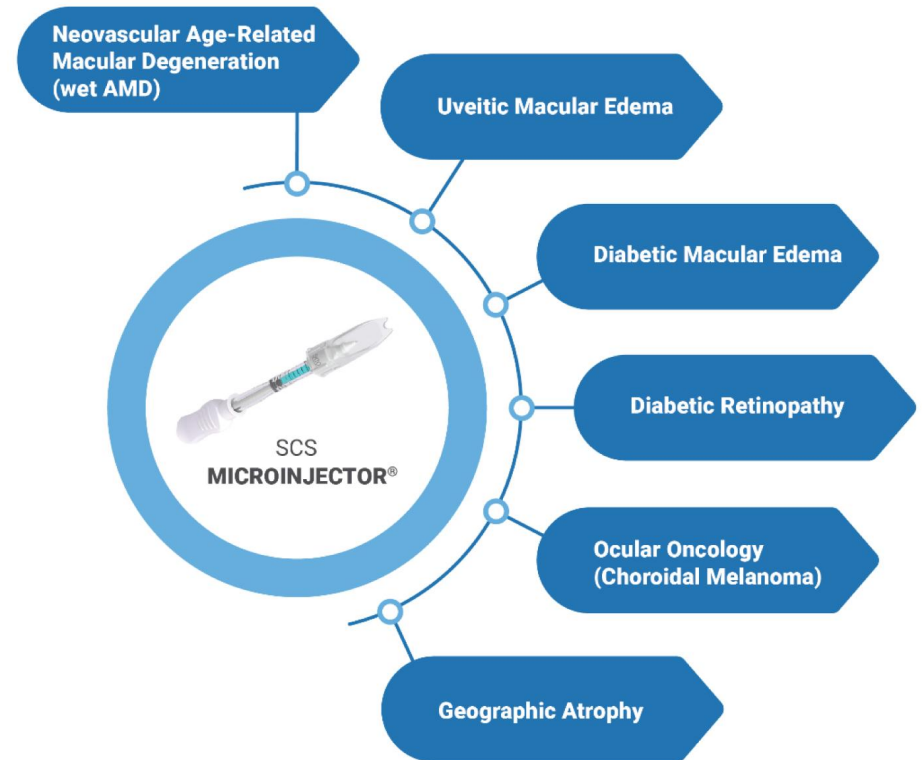


Injection Similar to Intravitreal

Advanced technology requires only a few seconds longer for each injection

SCS Microinjector®: Drug/Device Combination with Proven Versatility

- ✓ Demonstrated ability for precise delivery into the suprachoroidal space
- ✓ First and Only FDA-approved SCS product
- ✓ Safety profile of SCS Microinjector comparable to intravitreal injections¹
- ✓ Well-accepted by retinal physicians with thousands of injections performed



Straightforward Suprachoroidal Injection Technique

RETINA[®]
THE JOURNAL OF RETINAL AND VITREOUS DISEASES

REVIEW

SUPRACHOROIDAL SPACE INJECTION TECHNIQUE

Expert Panel Guidance

Wykoff, Charles C. MD, PhD¹; Avery, Robert L. MD²; Barakat, Mark R. MD^{1,6}; Boyer, David S. MD³; Brown, David M. MD⁴; Brucker, Alexander J. MD⁵; Cunningham, Emmett T. Jr MD, PhD, MPH^{1,11,15,16}; Heier, Jeffrey S. MD¹⁰; Holekamp, Nancy M. MD^{11,12}; Kaiser, Peter K. MD¹³; Khanani, Arshad M. MD, MA^{14,17}; Kim, Judy E. MD¹¹; Demirci, Hakan MD¹²; Regillo, Carl D. MD¹⁵; Yiu, Glenn C. MD, PhD¹¹; Ciulla, Thomas A. MD, MBA¹⁸

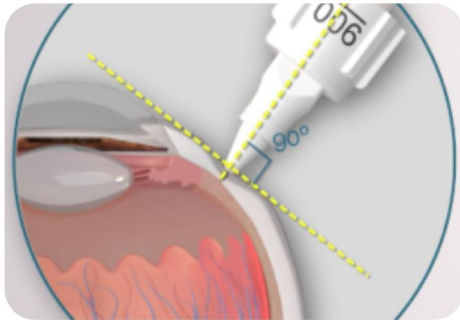
RETINA[®]
SPECIALIST

A beginner's guide to suprachoroidal injections

They require a different skill set than intravitreal injections. Here's a description of the technique.

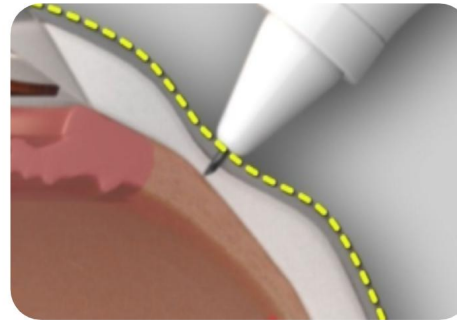
By Carol Villafuerte-Trisolini, MD, and Glenn Yiu, MD, PhD

DECEMBER 23, 2023



Perpendicular

Hold the microinjector **perpendicular** to the ocular surface



Dimple

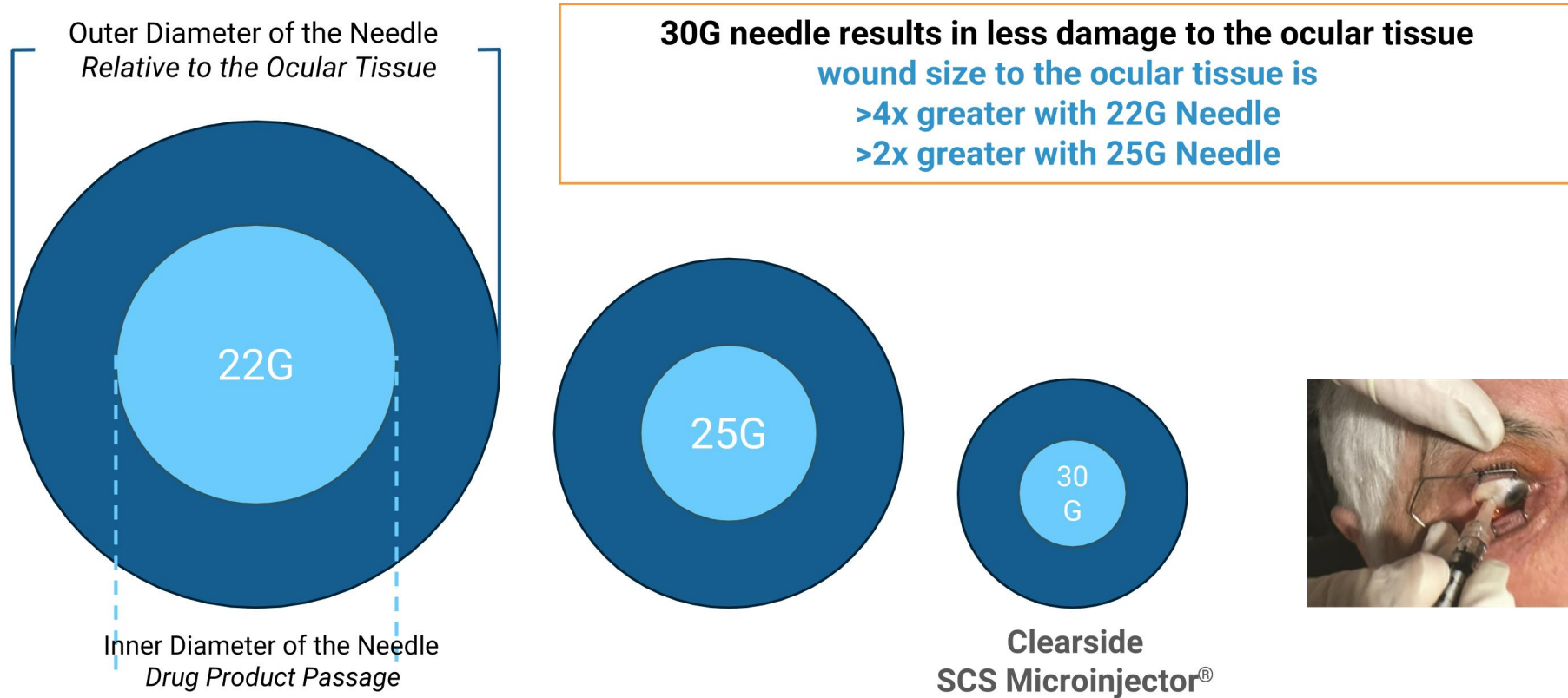
Ensure firm contact with sclera by maintaining a **dimple** throughout injection



Slow

Inject **slowly** over 5 – 10 seconds

Clearside Needle Size Equivalent to Most Commonly Used Intravitreal Injections and Smaller than Other TKIs in development



CLS-AX

(axitinib injectable suspension)

New mechanism of action with potential for longer duration of effect for the treatment of wet AMD



Axitinib is a Highly Potent, Highly Selective Pan-VEGF Inhibitor



Inhibits ALL VEGF Receptors (VEGFR-1, VEGFR-2, VEGFR-3)

- Intrinsic pan-VEGF inhibition through receptor blockade
- More active than anti-VEGF-A in *in-vitro* angiogenesis model¹⁻²
- Approved AMD treatments are focused VEGF-A inhibitors



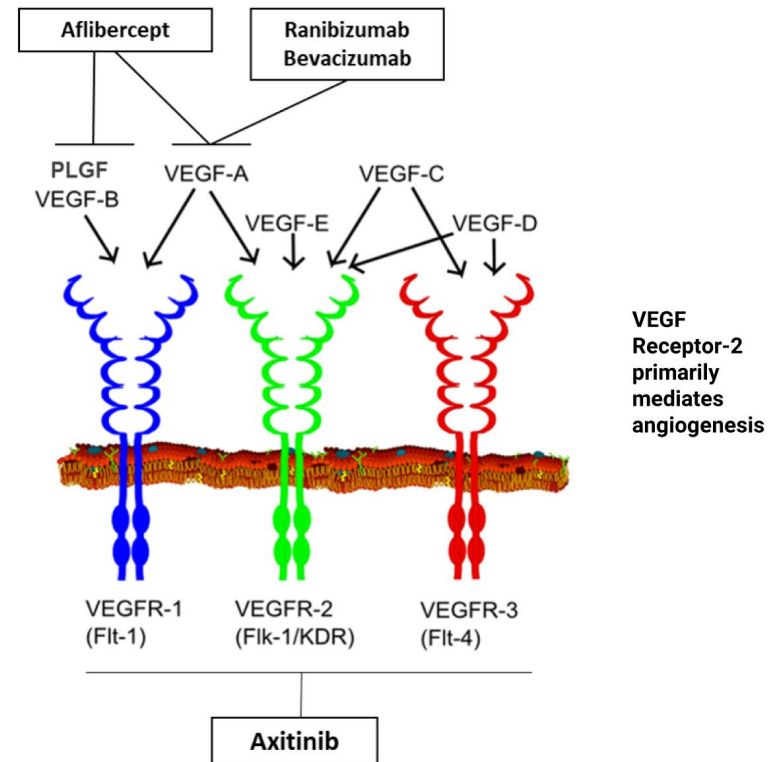
Tyrosine kinase inhibitor (TKI) with the highest potency

- >10x more potent than other TKIs in in-vitro studies³
- Better ocular cell biocompatibility than other TKIs⁴
- More active than other TKIs for experimental corneal neovascularization in preclinical models

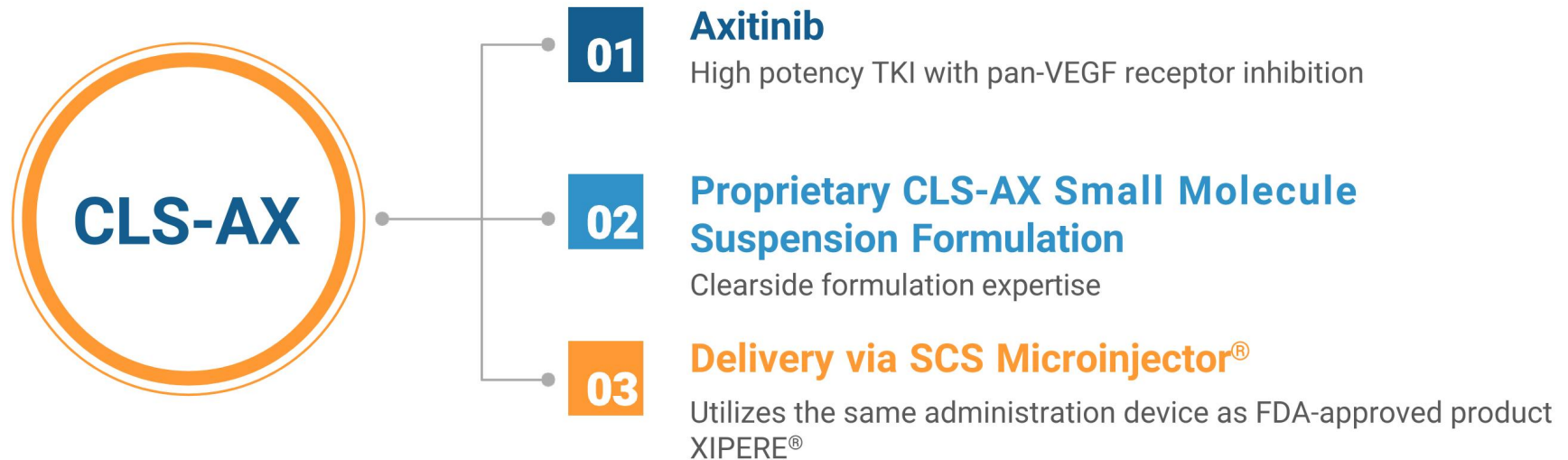


Small molecule formulated into suspension for SCS delivery

- Preclinical data showed regression of angiogenesis
- FDA-approved renal oncology treatment with established mechanism of action

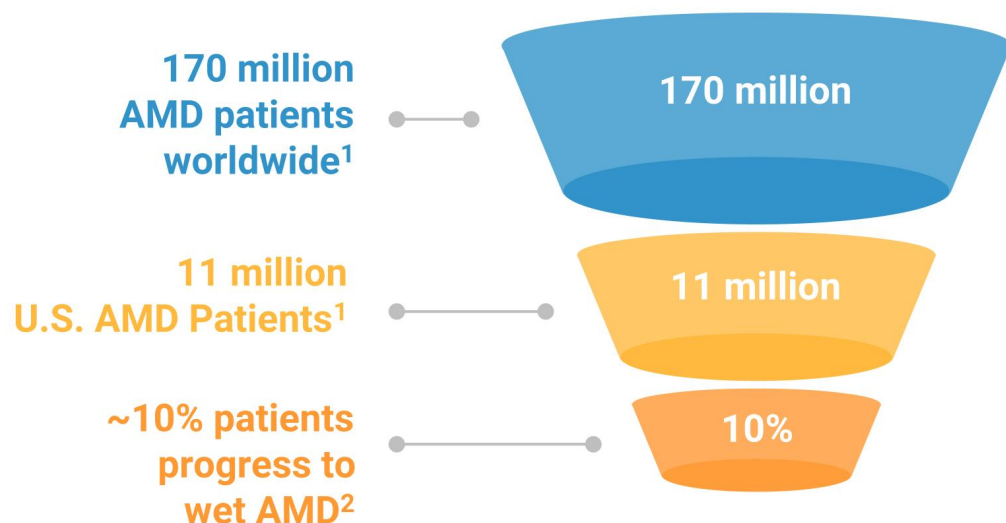


Leveraging a Highly Potent Pan-VEGF Inhibitor with Suprachoroidal Delivery



Age-Related Macular Degeneration (AMD) is a Multi-Billion Dollar Market

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 55¹
- ✓ U.S. prevalence expected to increase to 22 million by the year 2050¹
- ✓ Global prevalence expected to increase to 288 million by the year 2040¹
- ✓ Current treatments require frequent injections and subset of patients experience disappointing visual outcomes²
- ✓ **Over \$12 Billion Market and Growing³**

Positioning CLS-AX for Real-World Success

Maintain Vision & Reduce Office Visits

- Objective is to maintain visual acuity and reduce the number of injections; therefore, reducing the number of office visits
- Reduced treatment burden benefits patients, caregivers and payors with improved outcomes

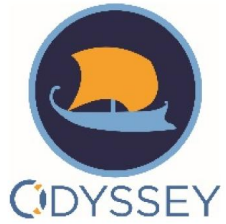
Ability to Re-dose

- Wet AMD is a chronic disease requiring ongoing treatment
- Goal is a label that allows re-dosing comparable to VABYSMO® and EYLEA HD® in the real-world setting

Extend Duration Over Currently Approved Drugs

2x - 4x/year maintenance dosing anticipated for CLS-AX compared to approved drugs on label*:

- LUCENTIS®: 12x/year
- VABYSMO®: 3x - 12x/year
- EYLEA®: 6x - 12x/year
- EYLEA HD®: 3x - 6x/year



Phase 2b Topline Data Summary and Phase 3 Plans

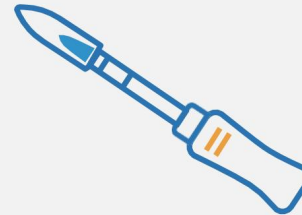
CLS-AX Now Phase 3 Ready Based on Positive ODYSSEY Data in Wet AMD



**Enrolled Only
Difficult-to-Treat
Participants with
Active Disease**



**Achieved
Primary Outcome
Maintaining Stable
BCVA with Repeat
Dosing**



**Compelling
Intervention-Free
Rates**



**Positive
Safety Profile
with Repeat
Dosing**

ODYSSEY Phase 2b Clinical Trial

ODYSSEY

Trial Objectives:
Evaluate safety, efficacy & duration of CLS-AX in participants with wet AMD

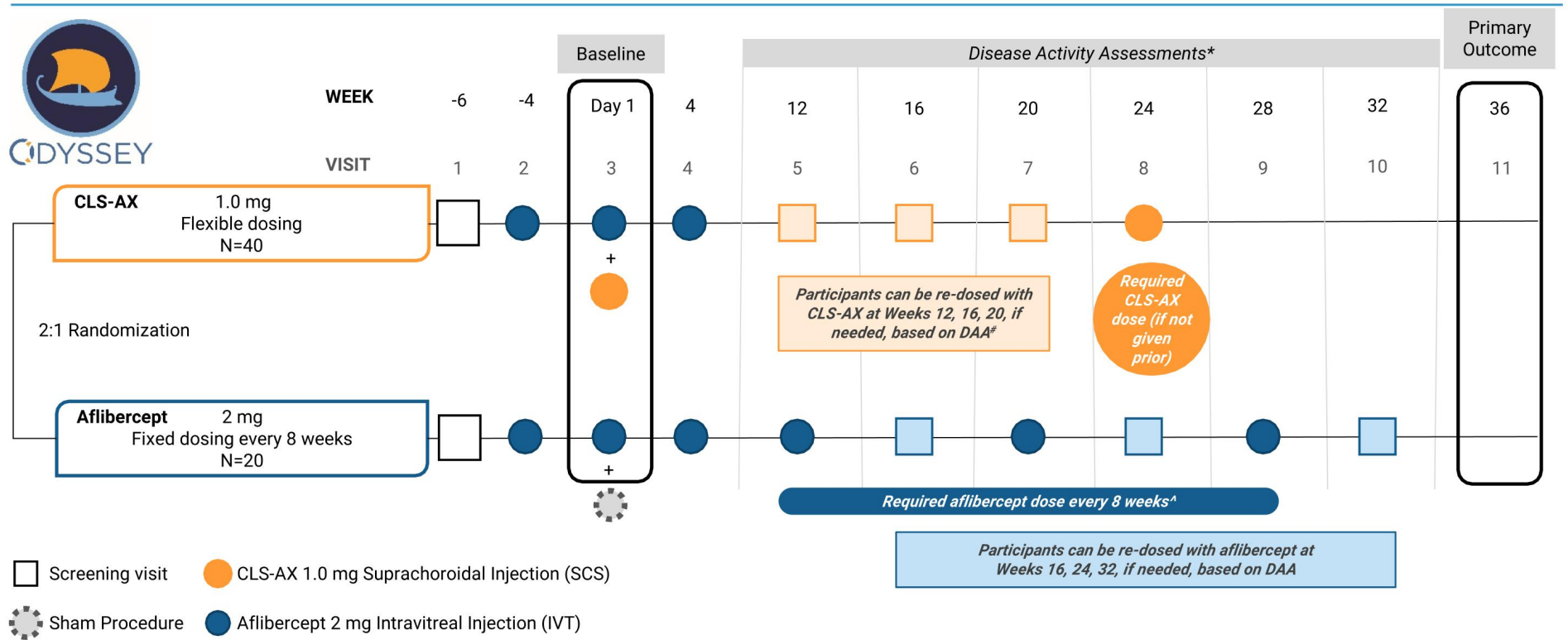
- Primary Outcomes: Mean change in BCVA from Baseline to **Week 36**; Safety & tolerability
- Secondary Outcomes: Other changes in visual function and retinal imaging, including CST; Need for supplemental treatment; Treatment burden as measured by total injections



Participant Profile:
60 total with 2:1 randomization
(40 in CLS-AX arm & 20 in aflibercept arm)

- Treatment experienced participants with reading center confirmation of **persistent active disease**
- Protocol requires **re-dosing with CLS-AX** in study arm
 - Participants receive at least 2 doses of CLS-AX
 - Provides important data to plan Phase 3 in chronic disease

ODYSSEY Trial Design



#Participants can be re-dosed with CLS-AX up to every 12 weeks; All arms are sham controlled

Demographics and Baseline Characteristics

Characteristics	CLS-AX	Aflibercept	Overall
No. of participants	40	20	60
Mean age (range), years	76.9 (51-90)	80.3 (54-96)	78.0 (51-96)
Women, no. (%)	25 (62.5)	14 (70.0)	39 (65.0)
Race, no. (%)			
White	37 (92.5)	20 (100)	57 (95.0)
Asian	3 (7.5)	0	3 (5.0)
Median duration of wet AMD diagnosis (range), months	9.65 (1.4-31.1)	10.2 (1.4-20.8)	9.9 (1.4-31.1)
Mean BCVA (range) at screening, ETDRS letters	69.1 (37-80)	69.1 (51-80)	69.1 (37-80)
Mean CST (range) at screening, μm	266.8 (175-378)	294.3 (209-592)	276.0 (175-592)
Mean Total Area of CNV (range) at screening, mm^2	6.8 (1.6-26.9)	6.5 (0.5-20.8)	6.7 (0.5-26.9)
Bilateral wet AMD, n	17	6	23
Mean annualized number of prior wet AMD treatments (injections/year) ^a (range)	9.5 (3.2-17.2)	9.2 (4.1-17.2)	9.4 (3.2-17.2)

CLS-AX Demonstrated Positive Clinical Activity in Wet AMD

Overall

Achieved Primary Outcome in participants with confirmed active disease

BCVA

Stable BCVA throughout the trial

Measured as mean change in BCVA from baseline to Week 36

CST

Stable CST throughout the trial

Measured as mean change in CST from baseline to Week 36

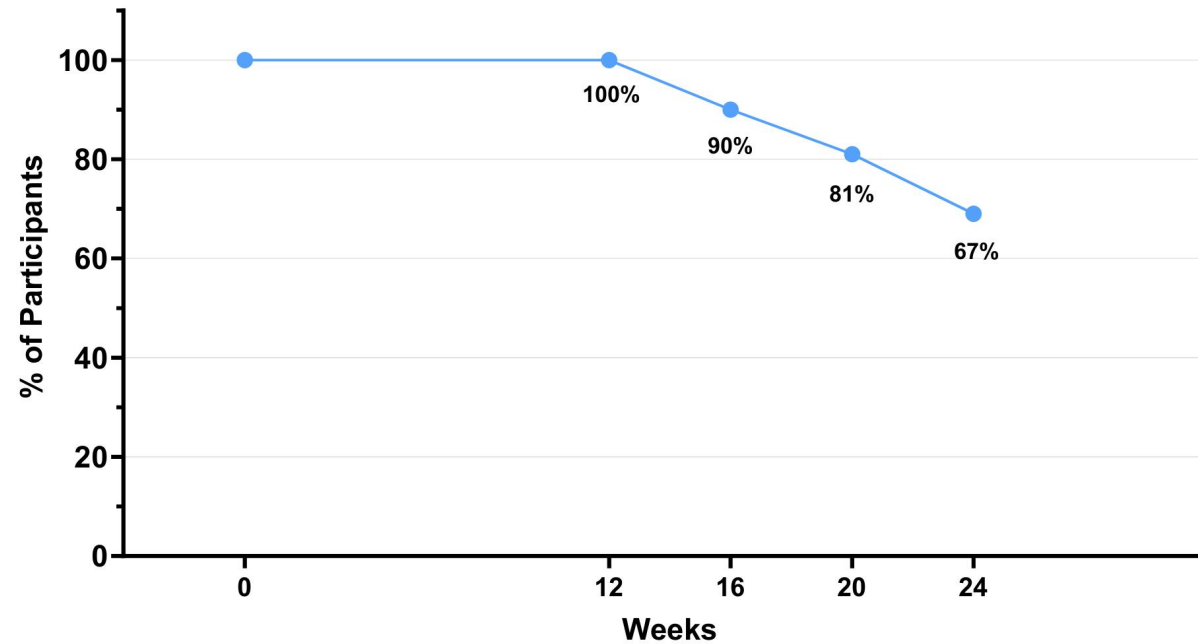
Durable Effect

67% of participants did not require any additional treatment for up to 24 weeks (6 months)

Injection frequency reduced by nearly 84% up to 24 weeks

Two-Thirds of Participants Dosed with CLS-AX Reached Six Months Without Additional Treatment

Intervention-Free Rates By Week Up to Each Visit



Week 12: 40/40 (100%)
Week 16: 35/39 (89.7%)
Week 20: 30/37 (81.1%)
Week 24: 26/39 (66.7%)

CLS-AX Consistently Reduced the Frequency of Injections

Comparison of Wet AMD Treatments Pre- and Post- Randomization

24 Weeks Before and After

Average number of treatments
24 Weeks prior to Screening Visit:
2.95 injections

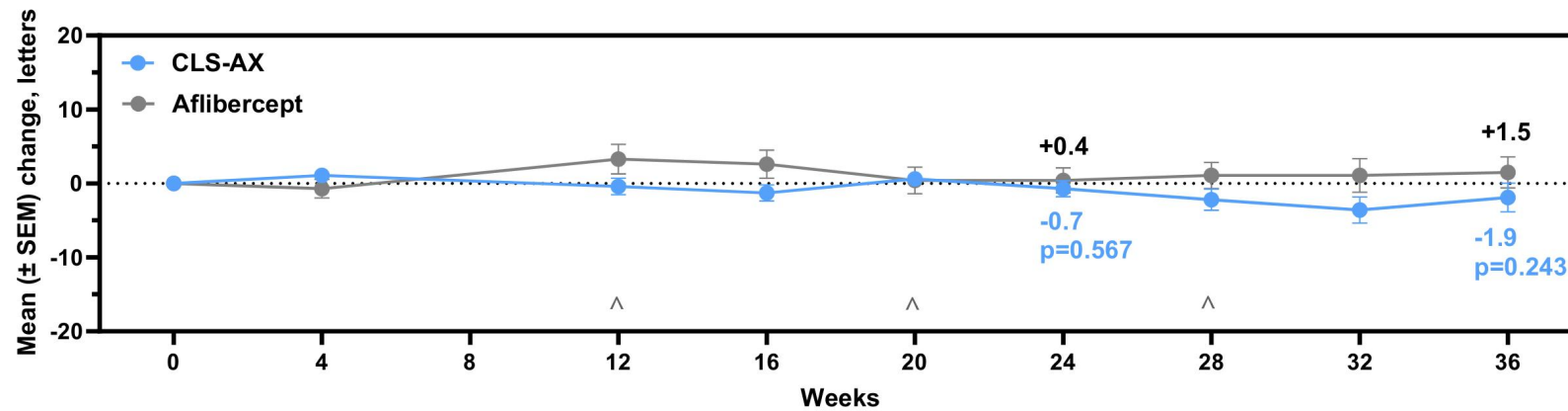
Average number of treatments
up to 24 Weeks after Baseline Visit:
0.475 injections

Reduced injection frequency by

84%

Stable Best Corrected Visual Acuity (BCVA) Over 36 Weeks

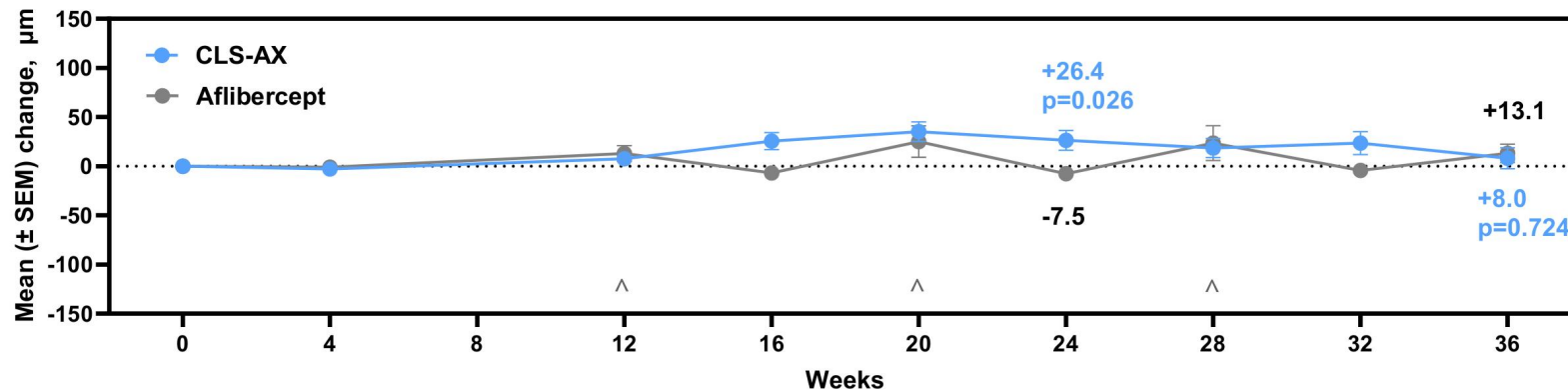
BCVA Within 2 Letters From Baseline at Both Week 24 and Week 36 in CLS-AX Arm



CLS-AX results do not include supplemental therapy with aflibercept

Stable Central Subfield Retinal Thickness (CSRT) Over 36 Weeks as Verified by Independent Reading Center

CLS-AX Demonstrates Stable Anatomical Control and Reduces Fluctuation



CLS-AX results do not include supplemental therapy with aflibercept

CLS-AX Demonstrated A Positive Safety Profile

Safety Profile

Well-tolerated safety profile through 36 weeks including after mandatory re-dosing of CLS-AX at Week 24

No Serious Adverse Events (SAEs)

No ocular SAEs or treatment-related SAEs:

- No drug or procedure related ocular SAEs
- No reported drug or procedure related systemic SAEs
- No endophthalmitis
- No retinal vasculitis

Positive Adverse Event (AE) Profile

Ocular AEs were considered **clinically mild** in both arms

- Only one reported incident related to mild eye pain out of 84 total CLS-AX injections (1.2%)

Discontinuation Rates

Similar discontinuation rates between treatment and comparator groups

CLS-AX Now Phase 3 Ready Based on Positive ODYSSEY Data



Achieved Primary Objective: Stable BCVA to Week 36
Difficult-to-treat Wet AMD participants with confirmed activity



Compelling injection free rates up to 6 months
Injection frequency reduced by nearly 84%



Positive safety profile
No ocular SAEs or treatment-related SAEs
CLS-AX was well-tolerated after re-dosing



**Only Phase 2 trial in wet AMD with repeat TKI dosing data to better inform
and potentially de-risk Phase 3 design**

CLS-AX Phase 3 Program Current Plans



CLS-AX Flexible Dosing of a Biologic with the Duration of a TKI

Phase 3 Program Summary

Two pivotal, non-inferiority trials

Two arms with ~225 participants per arm: CLS-AX 1mg vs aflibercept 2mg

Similar to Phase 3 trial design of EYLEA HD and VABYSMO in maintenance phase

Phase 3 flexible dosing data will be differentiated from other TKI programs

End-of-Phase 2 Meeting expected in Q1 2025

Expect to initiate both trials in 2H 2025

CLS-AX Phase 3 Non-Inferiority Study Design in Wet AMD Designed to Optimize Success

Target patient population:

- **Treatment naïve** → Potentially increase commercial value
- **No more than 1 previous injection of anti-VEGF** → Easier recruitment anticipated

Two strategies to reduce variability to enhance success in non-inferiority trial:

- **At Screening**
 - Participants must have 20/80 to 20/32 AND CST <500 at diagnosis
 - **Minimizes enrollment of highly variable participants** → **Intended to increase probability of success**
- **Prior to Randomization**
 - **At Visit 4 (Wk -4) following three aflibercept loading doses, eliminate:**
 - Participants with ≥ 10 letter change from Visit 3 (Wk -12) OR
 - CST (AI assessment) increases by ≥ 100 microns → **Intended to increase probability of more consistent results**

Flexible Dosing to Support Commercial Success

Personalized Treatment Interval (PTI) assessment enables physicians to use “real world” approach with flexible dosing schedule based on participant needs

Re-Dosing Criteria with CLS-AX

- **Improve consistency in assessing need for re-dosing** by using OCT biomarkers (IRF and SRF) determined in office using AI tool

Rescue Criteria with Aflibercept

- ≥ 10 letter loss AND
- ≥ 100 microns in 2 consecutive visits

Rationale based on learnings from ODYSSEY

- TKIs may take longer to act, thus some participants need to be re-dosed earlier
- There is variability in physician’s approach to providing rescue treatment

Year 1 Study Designed to Maximize Commercial and Competitive Potential in Wet AMD

						R/BL									PE									
Week	-20	-16	-12	-8	-4	D1	4	8	12	16	20	24	28	32	36	40	44	48	52					
Visit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19					
Activity					EC				PTI	PTI	PTI					PTI	PTI	PTI	PTI					
CLS-AX FLEX	A	A	A		A	C	S					C	S	S	S	S	S	C	S					
<p>Reduce variability</p>												C	S	S	S	S	C	S	S					
																	C	S	S	C	S	S	C	S
																	C	S	S	C	S	S	C	S
Aflibercept Q8W	A	A	A		A	S	A		A	S	A	S	A	S	C	S	S	S	C					

A, Aflibercept 2mg; C, CLS-AX 1 mg; S, Sham injection;
 R/BL, Randomization/Baseline; PE, Primary Endpoint;
 EC, Exclusion Criteria;
 PTI, Personalized Treatment Interval assessment by AI tool:
 IRF and/or SRF changes from Visit 6 (Baseline, Day 1).

➔ **EC: At Week -4, participants with high variation will be discontinued from the study.**
 At Weeks 12-20, participants meeting PTI criteria will be dosed at that visit and will continue on q12w, q16w or q20w until the primary endpoint.
 Participants not meeting PTI criteria at these visits will be dosed at Week 24 and will continue on q24w until the primary endpoint.

Study Design Intended to Provide Additional Safety and Efficacy Data After Primary Endpoint

After 36-Week Primary Endpoint:

- Aflibercept arm moves to CLS-AX every 16 weeks (q16w)
 - To maintain masking
 - To collect more safety data
 - To collect efficacy data for q16w CLS-AX in year 2
- CLS-AX arm stays on the original assignment after PTI assessment
 - Allows readjustment of dosing in CLS-AX arm (close to **real world** situation)
 - Similar to EYLEA HD and VABYSMO study designs

Year 2 Evaluation After Primary Endpoint

Week		40	44	48	52	56	60	64	68	72	76	80	84	88	92	96
Visit		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Activity		PTI	PTI	PTI	PTI	PTI	PTI	PTI	PTI	PTI	PTI	PTI	PTI	PTI	PTI	EOS
CLS-AX FLEX	Q24W	S	S	C ^a	S	S	S	S	S	C ^a	S	S	S	S	S	
	Q20W	C ^a	S	S	S	S	C ^a	S	S	S	S	C	S	S	S	
	Q16W	S	S	C ^a	S	S	S	C ^a	S	S	S	C ^a	S	S	S	
	Q12W	S	S	C	S	S	C	S	S	C	S	S	C	S	S	
Aflibercept Q8W		S	S	S	C	S	S	S	C	S	S	S	C	S	S	

C, CLS-AX 1 mg; S, Sham injection; EOS, End of Study.
For masking purposes, PTI assessments will be performed in all participants at all visits starting at Week 40.

^a For participants randomized to CLS-AX on a dosing interval of q24w, q20w, or q16w after Week 36, if PTI criteria are met at an active injection visit, then the next dosing interval will be reduced by 4 weeks, to a minimum of q12w.

Pipeline Expansion Opportunity in Geographic Atrophy



Potential Advantages of Suprachoroidal Delivery in Geographic Atrophy

Potential Target Product Profile (TPP) Aligns with SCS Suspension or SCS Gene Therapy



Able to reach the choroid first

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

Small molecules may have better efficacy than current therapies

- Potential to treat complement activation in both RPE and choroid

Suprachoroidal suspension/gene therapy may have longer duration (3 to 6 months)

- Intravitreal gene therapy may not achieve efficacy
- Subretinal has additional risks

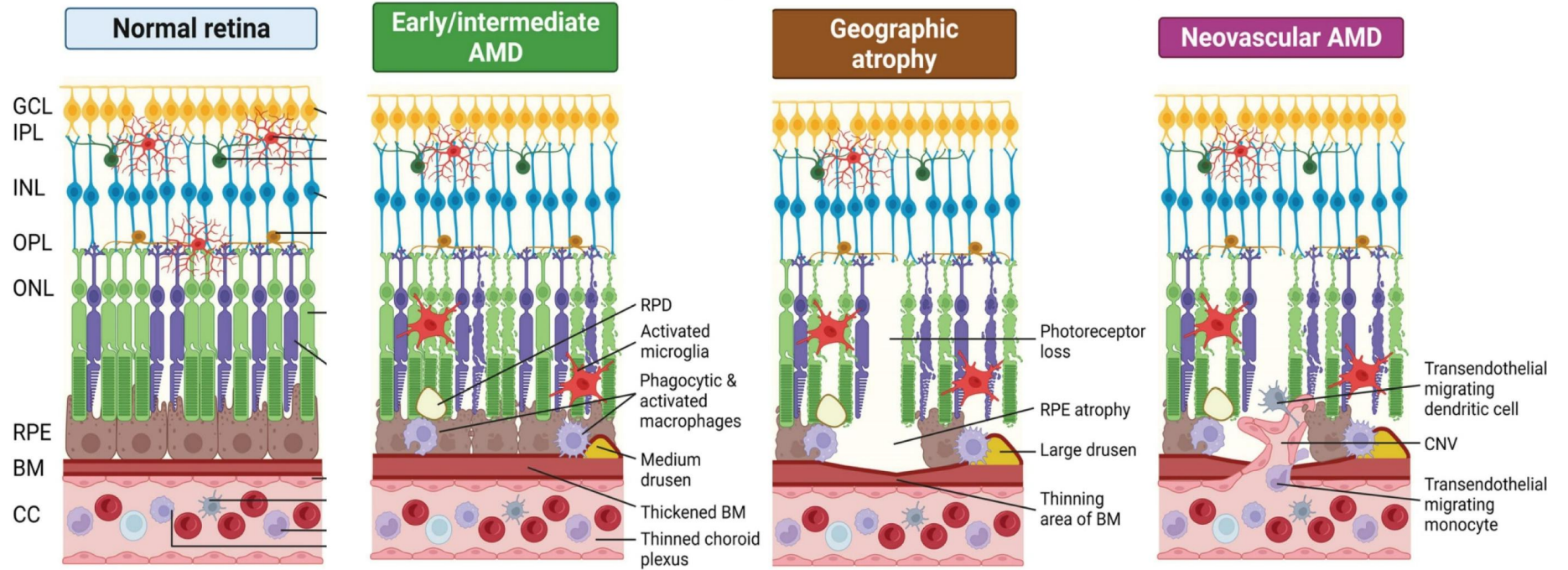
Less invasive, in-office procedure

- Systemic therapy may be effective, but potential infection risks in this elderly population
- Local ocular therapy may have fewer adverse events

Targeted delivery compartmentalized to the posterior segment

- Potentially fewer adverse events

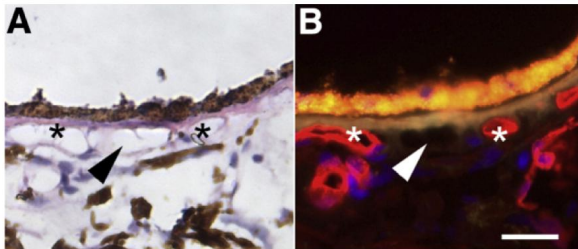
Pathology of Age-Related Macular Degeneration (AMD)



Geographic Atrophy is a Choroidal Disease

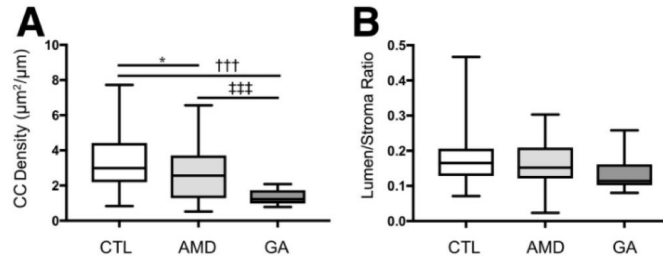
Choroidal Hypoxia Theory and Choriocapillaris are Damaged First

1



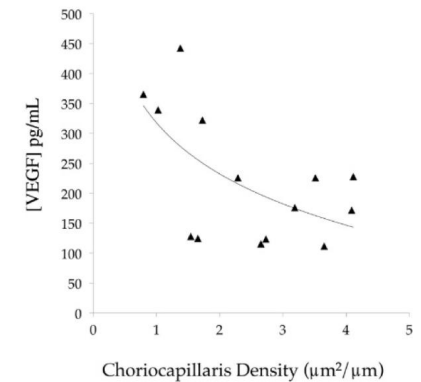
Choriocapillaris endothelial cells damage with ghost vessels before any significant RPE changes

2



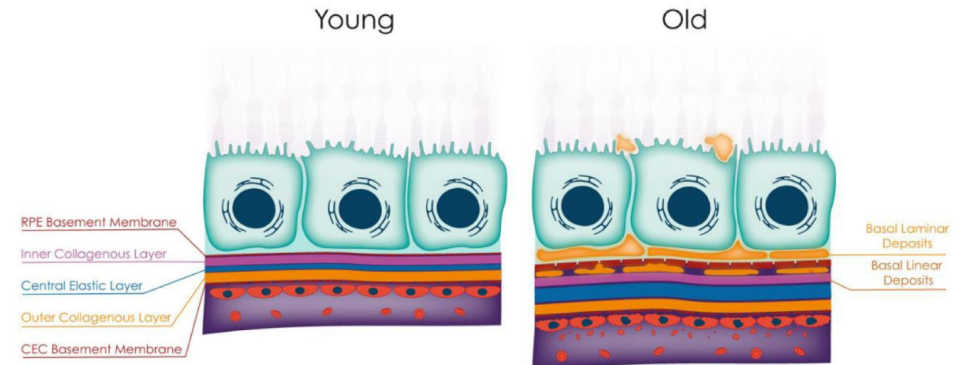
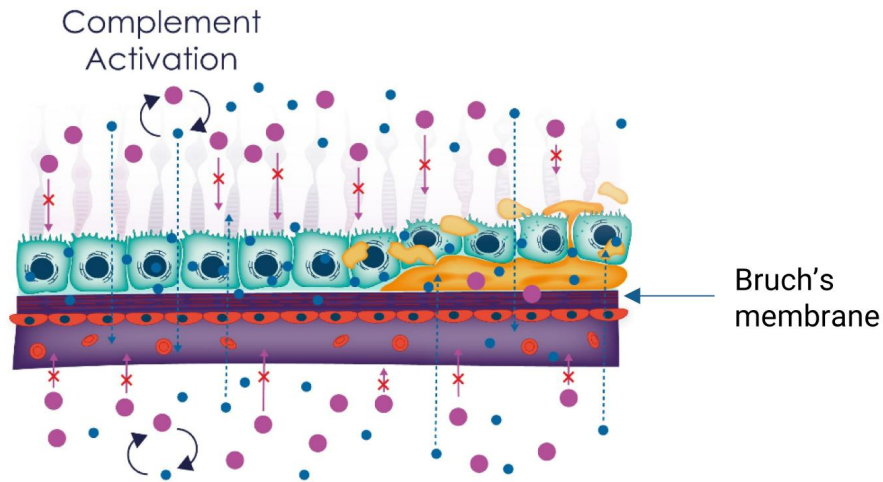
- Choriocapillaris (CC) vascular density is significantly lower in GA donor
- No meaningful differences in vascular lumen area / stroma area

3



VEGF level increased with low vascular density support the choroidal hypoxia theory

Small Molecule Can Access the Diseased Area of the RPE and Choroid



- Increased - Collagen, Lipids, TIMP-3, MMP-2, MMP-9, calcium phosphate and AGEs
- Decrease - Heparan Sulphate

Larger molecules cannot get through Bruch's membrane
So, if given intravitreally, it can only treat the RPE side

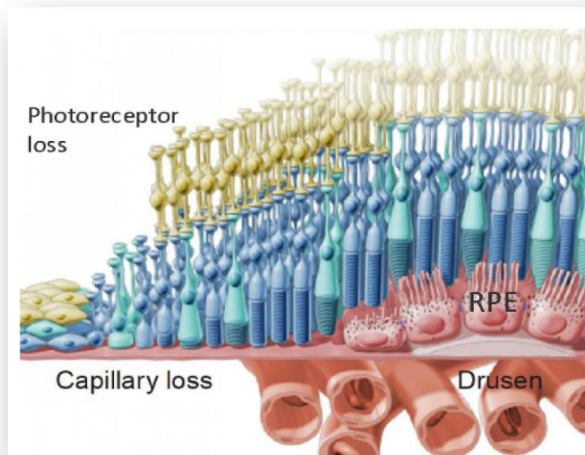
Aging intensifies disease actions and even peptides might not be able to get through

A Differentiated and Promising Approach Focusing on Choroidal Health and Capillary Homeostasis

- Neuroprotection
 - Promising preclinical evidence
 - Limited clinical success
- Lipid pathway
 - Complex lipid metabolism pathways
 - Clinical effectiveness likely to require removal of lipid from Bruch's
- Extracellular matrix modulation
 - (HTRA1, TIMP3 & MMPs)
 - Molecular mechanism is not controversial
 - Anti-HTRA1 failed in clinical trial
- Visual cycle modulation
 - Lacks robust clinical efficacy
 - Multiple failed trials

Complement inhibition

- Clinically validated
- Approved therapies have limited efficacy



Reduce choriocapillaris degeneration & improve choroidal perfusion

- Choriocapillaris degeneration precedes RPE and PR loss
- Implicated in the pathophysiology of AMD
- Warrants further clinical investigation

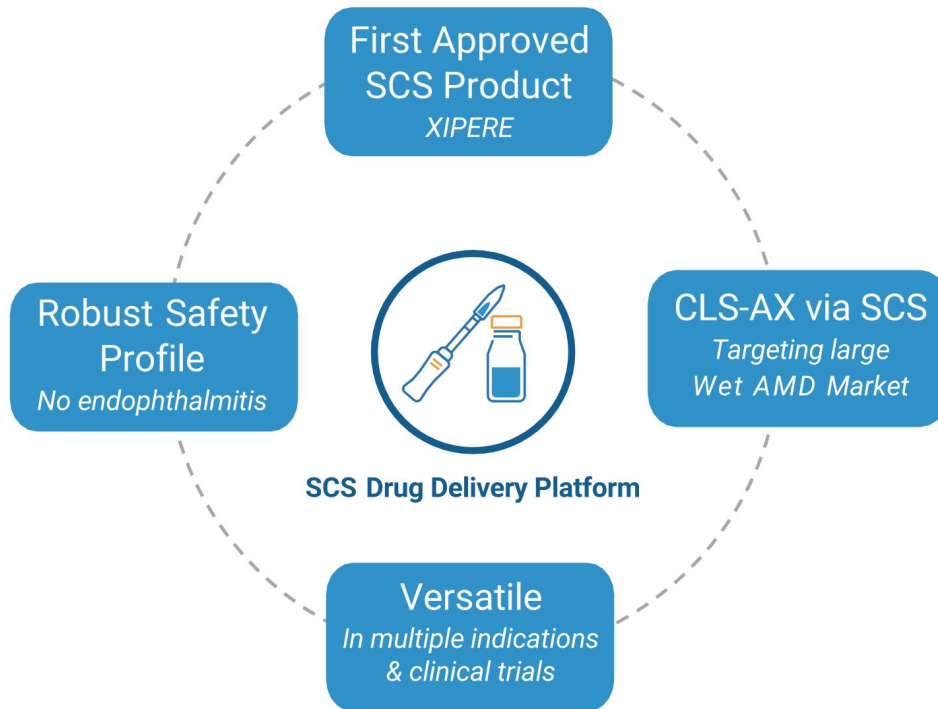
Control proinflammatory microenvironment

- Well-studied inflammatory pathways (macrophages, microglia, mast cells)
- Controls multiple disease-triggering insults

Summary



Innovative and Experienced Leader in Suprachoroidal Drug Delivery



Upcoming Potential Catalysts

CLS-AX (axitinib injectable suspension)

- ✓ ODYSSEY Phase 2b Topline Results
 - Q4 2024: Phase 3 Planning
 - Q1 2025: End-of-Phase 2 meeting with FDA

Medical/Scientific meeting presentations

- ✓ Q1 2024: Macula Society; Next Generation Ophthalmic Drug Delivery Summit
- ✓ Q2 2024: Retina World Congress; Clinical Trials at the Summit
- ✓ Q4 2024: AAO; Asia-Pacific Vitreo-Retina Society; Floretina

Publications

- ✓ Q2 2024: Expert panel practice guidelines on SCS[®] delivery in *Retina*
- ✓ H2 2024: OASIS Data in *Ophthalmology Science*



CLEARSIDE
BIOMEDICAL

Nasdaq: CLSD



Appendix



ODYSSEY Trial Focused on Participants with Active Disease

Key Inclusion Criteria

- Diagnosed with neovascular AMD (wet AMD) within 36 months of screening
- History of 2 to 4 anti-VEGF treatments in 6 months before screening and response to prior anti-VEGF treatment for wet AMD
- **Reading center confirmation of persistent active disease**; BCVA of 20 to 80 letters[#]

Dosing Regimen

- **Participants in both arms received 3 aflibercept (2 mg) loading doses (2nd dose = Baseline visit)**
- **CLS-AX arm received one dose of CLS-AX (1.0 mg) at Baseline visit**
- Unless DAA required more frequent dosing, **CLS-AX arm dosed at least every 24 weeks** & aflibercept arm dosed every 8 weeks

Disease Activity Assessments (DAA)

- **Monthly DAA: Weeks 12 through 32 in both arms** to determine if there is need for supplemental treatment
- Supplemental treatment criteria: Decrease in BCVA, increase in CST, or new or worsening vision-threatening hemorrhage due to wet AMD

Criteria for Supplemental Treatment

- BCVA reduction of >10 letters from Baseline measurement
- Increase in CST of >100 microns on SD-OCT from Baseline measurement
- BCVA reduction of > 5 letters from Baseline measurement AND increase in CST of >75 microns on SD-OCT from Baseline measurement
- Presence of new or worsening vision-threatening hemorrhage

ODYSSEY Trial Enrolled Rapidly

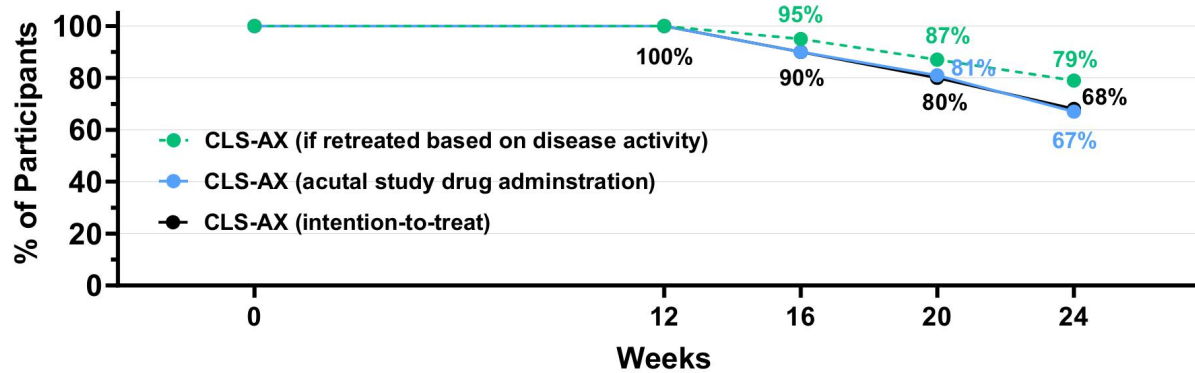


Study Activity	Date
First Participant Randomized	July 12, 2023
Last Participant Randomized	December 13, 2023

Disposition	CLS-AX	Aflibercept	Overall
Enrolled, n			158
Randomized, n	40	20	60
Completed, n (%)			
24 weeks	39 (97.5)	19 (95.0)	58 (96.7)
36 weeks*	36 (90.0)	17 (85.0)	53 (88.3)

Two-Thirds of Participants Dosed with CLS-AX Reached 6 Months Without Supplemental Therapy

Intervention-Free Rates By Week Up to Each Visit



Based on disease activity¹

Week 12: 40/40 (100%)
 Week 16: 37/39 (94.9%)
 Week 20: 32/37 (86.5%)
 Week 24: 30/38 (78.9%)

Actual study drug administration¹

Week 12: 40/40 (100%)
 Week 16: 35/39 (89.7%)
 Week 20: 30/37 (81.1%)
 Week 24: 26/39 (66.7%)

Intention-to-Treat

Week 12: 40/40 (100%)
 Week 16: 36/40 (90.0%)
 Week 20: 32/40 (80.0%)
 Week 24: 27/40 (67.5%)

ODYSSEY Confirmed the Ability to Administer Multiple Doses of CLS-AX with a Well-Tolerated Safety Profile

Of the 40 participants in the trial on study drug:
32 received two doses of CLS-AX and 6 received three doses of CLS-AX

Multi-Dosing Data		
CLS-AX Doses Received Including Baseline		
# Doses	# Participants	% of total enrolled (n=40)
1	2	5%
2	32	80%
3	6	15%