# Clearside Biomedical Positive OASIS and Extension Study Data Presented at The Retina Society 56th Annual Scientific Meeting

October 16, 2023

*- Excellent Safety Profile, Stable Vision, and Reduced Frequency of Injections Observed for up to 6 months –*

*- ODYSSEY Phase 2b Clinical Trial Enrollment is On Track with Data Expected in Q3 2024 -*

ALPHARETTA, Ga., Oct. 16, 2023 (GLOBE NEWSWIRE) -- Clearside Biomedical, Inc. (Nasdaq: CLSD), a biopharmaceutical company revolutionizing the delivery of therapies to the back of the eye through the suprachoroidal space (SCS®), announced today that key data from the Phase 1/2a OASIS clinical trial were presented at The Retina Society 56th Annual Scientific Meeting. The results of the trial demonstrate the key benefits of Clearside's patented suprachoroidal delivery platform and its lead drug candidate, CLS-AX (axitinib injectable suspension) being developed for the treatment of neovascular age-related macular degeneration (wet AMD or nAMD).

The presentation, entitled, "Safety and Tolerability of CLS-AX via Suprachoroidal Injection in nAMD Patients with Persistent Activity Following Anti-VEGF Therapy" was delivered by David M. Brown, MD, Retina Consultants of Texas. CLS-AX is a proprietary suspension formulation of the tyrosine kinase inhibitor (TKI) axitinib that provides high potency pan-VEGF inhibition delivered via Clearside's proprietary SCS Microinjector ®. Based on the data from OASIS, CLS-AX is currently being investigated in a Phase 2b clinical trial entitled ODYSSEY.

"We are looking to replicate the excellent safety profile, stable vision, and reduced frequency of injections we observed in OASIS and the Extension Study through 6 months in our ODYSSEY Phase 2b clinical trial that is actively enrolling participants in the U.S.," said, George Lasezkay, Pharm.D., J.D., President and Chief Executive Officer. "Our trial is enrolling as planned and we expect data from ODYSSEY in the third quarter of 2024. We continue to believe that our SCS Microinjector is a best-in-class delivery method for retinal diseases as it provides a targeted treatment approach with a reliable, in-office, non-surgical, non-implant delivery mechanism."

Dr. Brown's presentation summarized the promising data from Clearside's 3-month Phase 1/2a OASIS clinical trial and Extension Study through 6 months. Axitinib was described as a highly potent, pan-VEGF TKI to treat wet AMD which has shown 10x more potency than other TKS in preclinical studies. The advantages of suprachoroidal delivery directly targeting the site of disease at the back of the eye were featured through multiple preclinical studies comparing equivalent doses of axitinib injected suprachoroidally versus intravitreally.

In the OASIS and Extension Study, participants with wet AMD who were sub-responders with active disease at screening were followed for up to 6 months after CLS-AX treatment. This patient population is important because enrolling difficult to treat anti-VEGF sub-responders allowed observation of possible signs of biologic effect while minimizing false signals. The studies demonstrated an excellent safety profile at all doses and timepoints with no serious adverse events (SAEs), no dose limiting toxicities, and no adverse events (AEs) from inflammation. In addition, signs of biologic effect with stable mean best corrected visual acuity (BCVA) and stable mean central subfield thickness (CST) to the 6-month timepoint were observed. Importantly, CLS-AX exhibited early signs of durability and reduction in treatment burden with a 77-85% reduction in injection frequency at higher doses in cohorts 3 and 4.

Clearside's suprachoroidal delivery platform was also featured in a presentation by Dr. Rahul Khurana entitled, "Suprachoroidal Delivery of RGX-314 Gene Therapy for Neovascular AMD and Diabetic Retinopathy: Update on the AAVIATE and ALTITUDE Phase II Studies."

**About the OASIS Phase 1/2a Clinical Trial**

OASIS was an open-label, single dose-escalation Phase 1/2a trial in wet AMD participants to assess the safety and tolerability of a single dose of CLS-AX administered by suprachoroidal injection via Clearside's SCS Microinjector ®. Eligible participants were those who demonstrated stable visual acuity following two or more previous injections with an intravitreal anti-VEGF agent. All enrolled participants underwent diagnostic imaging on screening, followed by masked reading center confirmation of persistent active disease.

OASIS was a 3-month trial, followed by a 3-month Extension Study. The trial included four cohorts at the following doses: Cohort 1 at 0.03 mg; Cohort 2 at 0.1 mg; Cohort 3 at 0.5 mg; Cohort 4 at 1.0 mg. Participants from Cohorts 2, 3 and 4 who rolled over into the Extension Study were followed for a total of 6 months after a single dose of CLS-AX. Participants enrolled in OASIS were heavily anti-VEGF treatment experienced with active disease at screening, which was confirmed by an independent reading center.

Safety and Tolerability Results in All Cohorts in OASIS (n=27) and Extension Study (n=14):

- No serious adverse events (SAEs), no treatment emergent adverse events (TEAEs) related to study treatment, and no dose limiting toxicities.
- No adverse events related to inflammation, vasculitis or vascular occlusion.
- No vitreous "floaters" or dispersion of CLS-AX into the vitreous.
- No retinal detachments, endophthalmitis, or adverse events related to intraocular pressure.

Durability shown in Extension Study through 6 months in Cohorts 3 & 4 at the higher doses (n=12):

- 77% - 85% reduction in treatment burden was observed compared to the average monthly injections in the six months

before CLS-AX administration.

- Participants not requiring additional therapy:
  - ≥ 3 Months: 11/12 (92%)
  - ≥ 4 Months: 10/12 (83%)
  - ≥ 6 Months: 8/12 (67%)
  - > 6 Months: 6/12 (50%)

Biologic Effect in Extension Study through 6 months in Cohorts 3 & 4 (n=12):

- CLS-AX showed signs of biologic effect with stable mean BCVA and stable mean CST to the 6-month timepoint.
- On Optical Coherence Tomography (OCT) images, anatomical signs of TKI biologic effect were observed in anti-VEGF treatment experienced sub-responders.

**About the ODYSSEY Phase 2b Clinical Trial**

ODYSSEY is a randomized, double-masked, parallel-group, active-controlled, multi-center, Phase 2b clinical trial in participants with wet AMD. A total of 60 participants are expected to be treated for 36 weeks and will be randomized to either CLS-AX (1 mg) or aflibercept (2 mg) with a 2:1 randomization schedule (40 participants in CLS-AX arm and 20 participants in aflibercept arm). CLS-AX will be administered by suprachoroidal injection via Clearside's SCS Microinjector, and aflibercept will be administered via intravitreal injection. Eligible participants will be treatment-experienced and will undergo diagnostic imaging at their screening visit followed by masked reading center confirmation of persistent active disease. The primary outcome measure is the mean change from baseline in best corrected visual acuity. Secondary outcome measures include other changes from baseline in visual function and ocular anatomy, the need for supplemental treatment, and treatment burden as measured by total injections over trial duration. Additional information about the Phase 2b trial can be found on clinicaltrials.gov (NCT05891548).

**About CLS-AX (axitinib injectable suspension)**

CLS-AX (axitinib injectable suspension) is a proprietary suspension of axitinib for suprachoroidal injection. Axitinib is a tyrosine kinase inhibitor (TKI), currently approved as an oral tablet formulation to treat advanced renal cell carcinoma, that achieves pan-VEGF blockade, directly inhibiting VEGF receptors-1, -2, and -3 with high potency and specificity. Clearside believes this broad VEGF blockade may have efficacy advantages over existing retinal therapies by acting at a different level of the angiogenesis cascade and may benefit patients who sub-optimally respond to current, more narrowly focused anti-VEGF therapies. Suprachoroidal injection of this proprietary suspension of axitinib has demonstrated meaningful potential in preclinical studies in multiple species and in a Phase 1/2a wet AMD clinical trial in which CLS-AX was well tolerated and demonstrated an excellent safety profile. With suprachoroidal administration of axitinib, there is the potential to achieve prolonged duration and targeted delivery to affected tissue layers while limiting drug exposure to the front of the eye. Clearside is developing CLS-AX as a long-acting therapy for the treatment of retinal diseases.

**About Age-Related Macular Degeneration (AMD)**

Age-related macular degeneration causes a progressive loss of central vision and is the most common cause of legal blindness in individuals over age 55. Neovascular AMD (Wet AMD) is generally caused by abnormal blood vessels that leak fluid or blood into the macula, the part of the retina responsible for central vision, and accounts for the majority of vision loss in patients with this disorder. In the U.S., approximately 11 million patients are living with AMD[1], and about 10% have the wet form[2]. Current treatments require life-long, frequent injections to maintain efficacy. This treatment regimen tends to cause a treatment burden for patients resulting in reduced compliance and under-treatment leading to potentially limited outcomes. In the U.S., the total economic impact of late-stage AMD is estimated to be approximately $49 billion, with the majority of costs attributed to lower productivity related to job loss or job reduction due to the condition[3].

Sources

[1] 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.

[2] Prall, F Ryan and Ciulla, Thomas A, Medscape: Exudative (Wet) Age-Related Macular Degeneration (AMD), June 16, 2022.

[3] Retina International, The Socio-economic Impact of Age-related Macular Degeneration (AMD) in Bulgaria, Germany, and USA, Oct 12, 2022.

**About Clearside Biomedical, Inc.**

Clearside Biomedical, Inc. is a biopharmaceutical company revolutionizing the delivery of therapies to the back of the eye through the suprachoroidal space (SCS®). Clearside's SCS injection platform, utilizing the Company's patented SCS Microinjector ®, enables an in-office, repeatable, non-surgical procedure for the targeted and compartmentalized delivery of a wide variety of therapies to the macula, retina, or choroid to potentially preserve and improve vision in patients with sight-threatening eye diseases. Clearside is developing its own pipeline of small molecule product candidates for administration via its SCS Microinjector. The Company's lead program, CLS-AX (axitinib injectable suspension), for the treatment of neovascular age-related macular degeneration (wet AMD), is in Phase 2b clinical testing. Clearside developed and gained approval for its first product, XIPERE® (triamcinolone acetonide injectable suspension) for suprachoroidal use, which is available in the U.S. through a commercial partner. Clearside also strategically partners its SCS injection platform with companies utilizing other ophthalmic therapeutic innovations. For more information, please visit clearsidebio.com.

**Cautionary Note Regarding Forward-Looking Statements**

Any statements contained in this press release that do not describe historical facts may constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements may be identified by words such as "believe", "expect", "may", "plan", "potential", "will", and similar expressions, and are based on Clearside's current beliefs and expectations. These forward-looking statements include statements regarding the clinical development of CLS-AX, the number of sites for the ODYSSEY Phase 2b clinical trial for CLS-AX, the expected timing of topline results from the ODYSSEY clinical trial, and the potential benefits of CLS-AX and other product candidates using Clearside's SCS

Microinjector®. These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements. Risks and uncertainties that may cause actual results to differ materially include uncertainties inherent in the conduct of clinical trials, Clearside's reliance on third parties over which it may not always have full control and other risks and uncertainties that are described in Clearside's Annual Report on Form 10-K for the year ended December 31, 2022, filed with the U.S. Securities and Exchange Commission (SEC) on March 14, 2023 and Clearside's other Periodic Reports filed with the SEC. Any forward-looking statements speak only as of the date of this press release and are based on information available to Clearside as of the date of this release, and Clearside assumes no obligation to, and does not intend to, update any forward-looking statements, whether as a result of new information, future events or otherwise.

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