Clearside Biomedical Announces Additional Data from the CLS-AX ODYSSEY Phase 2b Trial Presented at the Angiogenesis, Exudation, and Degeneration 2025 Meeting

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- BCVA and CST Data from Sub-Group Analyses Provide Key Insights for Planned CLS-AX Phase 3 Trial Design -

ALPHARETTA, Ga., Feb. 10, 2025 (GLOBE NEWSWIRE) -- Clearside Biomedical, Inc. (Nasdaq: CLSD) ("Clearside" or the "Company"), a biopharmaceutical company revolutionizing the delivery of therapies to the back of the eye through the suprachoroidal space (SCS®), announced today that two subgroup analyses were presented from the ODYSSEY Phase 2b clinical trial at the Angiogenesis, Exudation, and Degeneration 2025 meeting. ODYSSEY was a randomized, double-masked, parallel-group, active-controlled, multicenter, 36-week trial evaluating CLS-AX (axitinib injectable suspension) in participants with neovascular age-related macular degeneration (wet AMD).

The presentation, entitled "Phase 2b CLS-AX ODYSSEY Trial Results", was presented by Roger Goldberg, MD, MBA, Bay Area Retinal Associates Medical Group. Dr. Goldberg reviewed key data from ODYSSEY, including two sub-group analyses that guided the design of the planned CLS-AX Phase 3 clinical development program. The presentation also described the differentiated combination of CLS-AX, a highly potent, selective pan-VEGF tyrosine kinase inhibitor (TKI), delivered by suprachoroidal injection utilizing Clearside's proprietary SCS Microinjector ®.

Victor Chong, MD, MBA, Chief Medical Officer and EVP, Head of Research and Development, commented, "The analyses presented at Angiogenesis highlight how CLS-AX can provide a durable treatment in wet AMD while maintaining visual acuity. The subgroup data from our ODYSSEY Phase 2b trial provided us with key clinical insights that contributed to the design of our planned CLS-AX Phase 3 non-inferiority clinical trials. These results support our plan to enroll a general population of treatment-naïve participants and potentially reduce non-disease related variability in visual acuity at randomization to better ensure the CLS-AX Phase 3 data can be translated to real-world treatment practices."

The first sub-group analysis supports enrolling treatment naïve patients in the planned CLS-AX Phase 3 program. The analysis showed stabilization of both the best corrected visual acuity (BCVA) and central subfield thickness (CST) in participants re-dosed with CLS-AX at Week 24 who did not require aflibercept rescue or CLS-AX re-dosing prior to Week 24. In ODYSSEY where the participants were intentionally screened to meet more difficult to treat criteria, 67% of those participants in the CLS-AX arm did not require aflibercept rescue or CLS-AX re-dosing for 6 months. By targeting the more general wet AMD population in the planned Phase 3 trial, there may be an even greater percentage of participants who can reach 6 months without the need for any intervention.

The second sub-group analysis supports excluding participants prior to randomization in the Phase 3 trial who demonstrated significant non-disease related changes in visual acuity. This sub-group analysis removed visit data from participants who had a greater than 10 letter change in BCVA without a corresponding 50 micron change in CST from the previous visit. The analysis demonstrated compelling BCVA results and provided evidence that excluding this group of potential participants may reduce BCVA variability unrelated to wet AMD activity and therefore, may better ensure the CLS-AX Phase 3 data reflect real-world treatment practices.

The presentation can be accessed here.

Upcoming Sessions on CLS-AX Wet AMD Program

The Macula Society 48th Annual Meeting (February 12-15, 2025)

Presentation: *Top Line Results from ODYSSEY: A Phase 2b Study of Suprachoroidally Administered CLS-AX in Participants with Neovascular Age-related Macular Degeneration*
Presenter: Thomas A. Ciulla, MD, MBA, Chief Medical Advisor-Retina and Chair, Scientific Advisory Board, Clearside Biomedical

5th Annual Wet AMD & Diabetic Eye Disease Drug Summit (March 18-20, 2025)

Presentation: *Transforming wAMD Treatment: Long-Lasting, Flexible Dosing with Suprachoroidal TKI Delivery*
Presenter: Victor Chong, MD, MBA, Chief Medical Officer, Clearside Biomedical

About ODYSSEY Phase 2b Clinical Trial

ODYSSEY was a randomized, double-masked, parallel-group, active-controlled, multicenter, 36-week, Phase 2b clinical trial in participants with wet AMD previously treated with intravitreal anti-vascular endothelial growth factor (VEGF) standard of care therapy. A total of 60 participants were treated for 36 weeks and 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 was administered via suprachoroidal injection using Clearside's SCS Microinjector, and aflibercept was administered via intravitreal injection. Participants in the trial were determined to have active disease with a median duration of wet AMD diagnosis of 9.9 months.

The ODYSSEY trial achieved its objectives, including primary outcomes in mean change from baseline in best corrected visual acuity and safety and tolerability of CLS-AX, and secondary outcomes in visual function and ocular anatomy, the need for supplemental treatment, and treatment burden as measured by total injections over the trial duration. CLS-AX demonstrated compelling intervention-free rates with 100% of CLS-AX participants not requiring any additional treatment up to 3 months, 90% up to 4 months, 81% up to 5 months, and 67% up to 6 months after the initial CLS-AX dose. In the CLS-AX group, the injection frequency was reduced by approximately 84% compared to the average monthly injections in the 24 weeks prior to screening.

About CLS-AX (axitinib injectable suspension)

Clearside is developing CLS-AX as a longer-acting therapy for the treatment of retinal diseases. 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 Phase 1/2a and Phase 2b wet AMD clinical trials in which CLS-AX was well tolerated and demonstrated a positive safety profile. With suprachoroidal administration of axitinib, there is the potential to achieve prolonged duration and targeted delivery to affected tissue layers by compartmentalizing axitinib behind the retina, thereby limiting drug exposure to the front of the eye.

About Clearside's Suprachoroidal Space (SCS ®) Injection Platform and SCS Microinjector®

Clearside's patent protected, proprietary suprachoroidal space (SCS ®) injection treatment approach offers unprecedented access to the back of the eye, where sight-threatening disease often occurs. The Company's unique platform is inherently flexible and intended to work with established and new formulations of medications. Clearside's patented SCS Microinjector ® can deliver a wide variety of drug candidates into the suprachoroidal space, providing targeted delivery to potentially improve efficacy and compartmentalization of medication to reduce or eliminate toxic effects on non-diseased cells. The SCS Microinjector is comprised of a syringe with a custom-designed hub and two 30-gauge hollow microneedles of varying lengths, each approximately one millimeter, optimizing insertion and suprachoroidal administration of drugs.

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®) to improve patient outcomes. 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), is in development for the treatment of neovascular age-related macular degeneration (wet AMD). Planning for a Phase 3 program is underway. In addition, Clearside is evaluating various small molecules for the potential long-acting treatment of geographic atrophy (GA). 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 or follow us on LinkedIn and X.

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, including the planned Phase 3 trial design, as well as the potential benefits of CLS-AX, Clearside's suprachoroidal delivery technology and 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, 2023, filed with the U.S. Securities and Exchange Commission (SEC) on March 12, 2024, Clearside's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024, filed with the SEC on November 12, 2024, 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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Source: Clearside Biomedical, Inc.