# Clearside Biomedical Announces Multiple Poster Presentations at the Retina Society 54th Annual Scientific Meeting

October 4, 2021

ALPHARETTA, Ga., Oct. 04, 2021 (GLOBE NEWSWIRE) -- Clearside Biomedical, Inc. (NASDAQ:CLSD), a biopharmaceutical company dedicated to developing and delivering treatments that restore and preserve vision for people with serious back of the eye diseases, announced today that multiple presentations were given at the Retina Society 54th Annual Scientific Meeting which took place September 29 – October 2, 2021 in Chicago, IL.

"These presentations demonstrate the targeted and compartmentalized nature of suprachoroidal delivery, as well as the safety profile of suprachoroidal injection with our proprietary SCS Microinjector®," said Thomas A. Ciulla, M.D., MBA, Chief Medical Officer and Chief Development Officer. "The presentations highlighted the potential benefits of the suprachoroidal administration of our first clinical asset, XIPERE™ (triamcinolone acetonide suprachoroidal injectable suspension), formerly known as CLS-TA, and we hope to leverage these potential benefits in the development of our second clinical asset, CLS-AX, currently in a Phase 1/2a OASIS clinical trial for the treatment of wet age-related macular degeneration (wet AMD)."

Dr. Ciulla continued, "At the Meeting, our partner REGENXBIO presented positive initial data from Cohort 1 at 6 months in their ongoing Phase II AAVIATE® trial of RGX-314 for the treatment of wet AMD using in-office suprachoroidal delivery with our SCS Microinjector. Importantly, this is the first data ever presented utilizing gene therapy delivered into the suprachoroidal space of the eye in a clinical trial. We are also encouraged by the initial safety results that REGENXBIO has reported, in which suprachoroidal delivery of RGX-314 was well tolerated in 50 patients in the first three cohorts."

**Title: Comparison of Suprachoroidal and Intravitreal Injection Flow Mechanics Analyzed via Multimodal Imaging**
**Lead Author:** Dennis M. Marcus, M.D.
**Conclusions:** This presentation compared suprachoroidal and intravitreal injections using several multimodal imaging diagnostics to demonstrate the injection flow differences between the two procedures. During an intravitreal injection, a bolus of dye was seen in the porcine vitreous cavity. In contrast, during a suprachoroidal injection, spreading of the dye was observed circumferentially and posteriorly towards the back of the eye, between the sclera and choroid. Optical coherence tomography (OCT) images in humans and preclinically demonstrated a definitive expansion of the suprachoroidal space beyond the scleral spur just minutes after suprachoroidal injection. These imaging modalities showed that suprachoroidal injection resulted in three important treatment attributes: 1) targeted delivery to affected chorioretinal tissues for potential efficacy; 2) compartmentalization away from unaffected tissues for potential safety benefits; and 3) bioavailability as a result of the chorioretinal tissues essentially bathed with therapy.

**Title: Safety of the Suprachoroidal Injection Procedure Utilizing SCS Microinjector® across Three Retinal Disorders**
**Lead Author:** Mathew MacCumber, M.D., Ph.D.
**Conclusions:** In this analysis, safety data from the day of the procedure was compiled from 626 patients in eight clinical trials across three disease states where suprachoroidal injections were performed including noninfectious uveitis, diabetic macular edema, and retinal vein occlusion. Overall, across the eight clinical trials, the safety profile of suprachoroidal injections, either as monotherapy or in conjunction with intravitreal anti-VEGF injections, is broadly comparable to that reported in registration trials involving intravitreal anti-VEGF injections alone.

**Title: OCT Anatomic & Temporal Biomarkers in Uveitic Macular Edema**
**Lead Author:** Thomas Albini, M.D.
**Conclusions:** There is limited information on longitudinal structure-functional correlations in uveitic macular edema (UME). In clinical practice, physicians often base treatment decisions on best corrected visual acuity (BCVA) and/or Optical Coherence Tomography **(**OCT) assessment. PEACHTREE and AZALEA were Phase 3 UME clinical trials evaluating the efficacy and safety of CLS-TA, a proprietary suspension of the corticosteroid triamcinolone acetonide formulated for suprachoroidal administration. This post hoc analysis of 198 eyes with UME evaluated clinically relevant and prognostic relationships between BCVA and OCT-assessed features of macular edema. Importantly, this analysis showed that anatomic response may precede visual response in UME among patients treated with CLS-TA.

**Title: Visual Function and Anatomic Outcomes Stratified by Baseline Visual Acuity in Patients Undergoing Suprachoroidal Injections for Macular Edema Associated with Noninfectious Uveitis**
**Lead Author:** Christopher Henry, M.D.
**Conclusions:** In the PEACHTREE and AZALEA clinical trials, patients received CLS-TA via suprachoroidal microinjector at baseline and week 12, and were followed for 24 weeks. For this post hoc analysis, 134 patients in the CLS-TA study arm of both trials experienced a clinically significant improvement in vision at 24 weeks, regardless of visual acuity at baseline, demonstrating the activity of suprachoroidal injection of CLS-TA for the treatment of macular edema in noninfectious uveitis. Macular thickness also improved to approximately 300 microns regardless of baseline vision.

**Title: Safety and Visual Function of Suprachoroidal CLS-TA versus Real World Rescue Therapies for Macular Edema associated with Noninfectious Uveitis:**
**A Post-hoc Analysis**
**Lead Author:** Pouya Dayani, M.D.
**Conclusions:** In this post hoc analysis of the PEACTHREE trial, visual function and safety outcomes of unrescued CLS-TA subjects were compared to rescued subjects in the control group. Unrescued CLS-TA subjects experienced statistically significant greater reduction in central subfield thickness and tended towards greater improvement in BCVA compared with control subjects rescued with therapies reflecting current clinical treatment. Suprachoroidally administered CLS-TA also appeared to be associated with a lower incidence of intraocular pressure-related safety findings. This post hoc analysis provides a comparison of CLS-TA to a "real world" mix of rescue treatments, and corroborates the pre-specified endpoints of the Phase 3

PEACHTREE study.

Additional details on Clearside's presentations can be accessed on the Company's website here.

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

Clearside's patented, 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 proprietary SCS Microinjector ® can be used to inject a wide variety of drug candidates that are specifically formulated to be delivered via suprachoroidal injection. The SCS Microinjector provides targeted delivery to potentially improve efficacy and compartmentalization of medication to reduce or eliminate toxic effects on non-diseased cells. The SCS Microinjector is composed of a syringe and two 30-gauge hollow microneedles of varying lengths, each less than 1.2 millimeters, within a custom-designed hub that optimizes insertion and suprachoroidal administration of drugs.

**About XIPERE™ (triamcinolone acetonide suprachoroidal injectable suspension)**

XIPERE™ (triamcinolone acetonide suprachoroidal injectable suspension), formerly known as CLS-TA, is a proprietary suspension of the corticosteroid triamcinolone acetonide formulated for administration to the suprachoroidal space for the treatment of macular edema associated with uveitis. Clearside's patented technology is designed to deliver drug to the suprachoroidal space located between the choroid and the outer protective layer of the eye, known as the sclera. Suprachoroidal injection enables the rapid dispersion of medicine to the back of the eye, offering the potential for the medicine to act longer and minimize harm to the surrounding healthy parts of the eye. Bausch + Lomb, a leading global eye health business of Bausch Health Companies Inc. (NYSE/TSX: BHC), has the exclusive license for the commercialization and development of XIPERE in the United States and Canada. Arctic Vision, a specialty ophthalmology company based in China, has the exclusive license for the commercialization and development of XIPERE in Greater China, South Korea, Australia, New Zealand, India and the ASEAN Countries. XIPERE is not yet approved in any jurisdiction.

**About Uveitis and Macular Edema**

Uveitis is a set of ocular inflammatory conditions and is one of the leading causes of vision loss, affecting approximately 350,000 patients in the United States and more than one million worldwide. Approximately one-third of these patients develop uveitic macular edema, a build-up of fluid in the macula, the area of the retina responsible for sharp, straight-ahead vision. Macular edema is the leading cause of vision loss and blindness in uveitis patients and can occur from uveitis affecting any anatomic location - anterior, intermediate, posterior or pan. The uveitis market is expected to grow by 2024 to nearly $550 million in the United States and over $1 billion globally.

**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 to treat renal cell cancer 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. Preclinical results from Clearside and independent investigators have shown pharmacodynamic effects with reduced growth of experimental neovascularization and decreased fluorescein leakage. With suprachoroidal administration of axitinib, there is the potential to achieve prolonged duration and targeted delivery to affected tissue layers. Clearside is developing CLS-AX as a long-acting therapy for the treatment of wet AMD. CLS-AX is currently being investigated in an ongoing US-based, multi-center, open-label, dose-escalation, Phase 1/2a, safety and tolerability study, entitled OASIS, in wet AMD patients, and additional information can be found on https://clinicaltrials.gov (NCT04626128).

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

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

Enrolled patients initially receive aflibercept at the first visit followed by a single dose of CLS-AX at the second visit one month later. The primary endpoint for the trial will assess the safety and tolerability of CLS-AX for the three months following the administration of CLS-AX, and secondary endpoints will evaluate the pharmacokinetics, visual function, ocular anatomy, and the need for additional treatment with intravitreal aflibercept during the three-month period.

The study design is planned with 3 cohorts of approximately 5 patients each (n=15). Cohort 2 participants received a dose of 0.1 mg of axitinib delivered via suprachoroidal injection. Dose escalation will proceed following review of the Cohort 2 safety data by the Safety Monitoring Committee and their recommendation to advance to the next higher dose cohort. Additional information on the Phase 1/2a trial can be found on https://clinicaltrials.gov (NCT04626128).

**About Neovascular Age-Related Macular Degeneration (wet 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. 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, and about 20% have the wet form. 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.

**About Clearside Biomedical**

Clearside Biomedical, Inc. is a biopharmaceutical company dedicated to developing and delivering treatments that restore and preserve vision for

people with serious back of the eye diseases. Clearside's proprietary SCS Microinjector ® targets the suprachoroidal space (SCS®) and offers unique access to the macula, retina and choroid where sight-threatening disease often occurs. The Company's SCS injection platform is an inherently flexible, in-office, non-surgical procedure, intended to provide targeted delivery to the site of disease and to work with both established and new formulations of medications. For more information, please visit www.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 and the potential benefits of XIPERE (formerly known as CLS-TA), CLS-AX and other therapies using Clearside's SCS Microinjector ®, as well as Clearside's ability to leverage the potential benefits of the suprachoroidal approach in the development of CLS-AX. 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, uncertainties regarding the COVID-19 pandemic and other risks and uncertainties that are described in Clearside's Annual Report on Form 10-K for the year ended December 31, 2020, filed with the U.S. Securities and Exchange Commission (SEC) on March 15, 2021, 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.

**Investor and Media Contacts:**

Jenny Kobin
Remy Bernarda
ir@clearsidebio.com
(678) 430-8206

Source: Clearside Biomedical, Inc.