



Emmecell Announces Positive Topline Results from Randomized, Double-masked Trial of Groundbreaking Non-surgical Cell Therapy for Corneal Edema

- Cohort receiving 150,000 cells achieved 11-letter mean change in best corrected visual acuity ("BCVA") at 6 months, with 38% of subjects achieving at least 15-letter vision gain
- All cohorts tested showed improvements in BCVA and central corneal thickness ("CCT")
- Positive safety profile with no ocular or treatment-related serious adverse events ("SAEs")

MENLO PARK, Calif., Nov. 18, 2024 /PRNewswire/ -- Emmecell, a clinical-stage biotechnology company revolutionizing cell-based therapies for serious eye diseases, today announced exciting topline results from its U.S. multi-center Phase 1 extension study evaluating EO2002, a non-surgical cell therapy for corneal edema. The randomized, double-masked trial demonstrated significant improvements in vision and corneal health, alongside a strong safety profile.

In the cohort receiving 150,000 endothelial cells, patients experienced an impressive mean gain of 11 letters in Best Corrected Visual Acuity (BCVA) at six months. Notably, 38% of patients achieved a vision gain of at least 15 letters, a crucial regulatory milestone. Across all dose levels tested—150,000, 500,000, and 1 million cells—participants showed improvement in BCVA and reductions in central corneal thickness (CCT), reflecting the therapy's broad efficacy.

"Emmecell is thrilled to share these promising results from our proof-of-concept trial," said **Jeffrey L. Goldberg, MD, PhD**, co-founder of Emmecell and professor and chair of ophthalmology at Stanford University. "These findings strongly support advancing EO2002 into Phase 3 trials, bringing us closer to providing a transformative, non-surgical treatment for patients with corneal edema."

Emmecell's patented **Magnetic Cell Delivery®** technology enables precise delivery of endothelial cells to the posterior cornea, promoting integration and improving visual outcomes. The therapy's safety profile was also encouraging, with **no ocular or treatment-related serious adverse events (SAEs)** reported across the 30 trial participants.

Transformative Potential for Eye Health

In addition to vision gains, the study revealed important structural improvements. According to **Roger A. Goldberg, MD, MBA**, co-founder and Chief Medical Advisor of Emmecell, "EO2002 not only delivered robust functional improvements but also demonstrated anatomic biomarkers of efficacy, such as reduced central corneal thickness and increased endothelial cell density. Remarkably, a subset of patients treated at an advanced center showed a nearly 50% reduction in central guttae—suggesting true disease modification for conditions like Fuchs dystrophy."

EO2002 represents a first-in-class therapy with the potential to address a major unmet need. Currently, corneal edema often requires invasive and high-risk surgical procedures like corneal transplants, which are limited by donor availability and accessibility. EO2002's **non-surgical approach** offers the opportunity to treat hundreds of eyes from a single donor cornea, potentially transforming the standard of care.

"The ability to treat corneal edema without surgery is a game-changer for patients," said **Ellen Koo, MD**, professor of ophthalmology at the Bascom Palmer Eye Institute, University of Miami, and an investigator in the study. "With EO2002, we could significantly expand access to treatment and improve outcomes for a larger population."

Meeting the Growing Need

In the U.S. alone, approximately 50,000 corneal transplants are performed annually, leaving many patients untreated due to the invasive nature of surgery or limited donor tissue availability. EO2002 offers a groundbreaking alternative, combining safety, efficacy, and scalability to address this substantial need.

Emmecell plans to present detailed results at upcoming medical conferences and looks forward to advancing EO2002 into pivotal Phase 3 trials. The company remains committed to driving innovation in the treatment of corneal and retinal diseases, leveraging its expertise to improve vision and quality of life for patients worldwide.

About Emmecell

Emmecell is a clinical-stage biotechnology company dedicated to developing advanced cell therapies for eye diseases. With proprietary technologies like Magnetic Cell Delivery®, Emmecell is transforming how conditions like corneal edema and retinal disorders are treated—safely, effectively, and non-surgically.

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