

# Study: Stem cells may aid vision in blind people

**AP** By ALICIA CHANG / Associated Press – Mon, Jan 23, 2012

LOS ANGELES (AP) — Two legally blind women appeared to gain some vision after receiving an experimental treatment using embryonic stem cells, scientists reported Monday.

While embryonic stem cells were first isolated more than a decade ago, most of the research has been done in lab animals. The new results come from the first tests in humans for a vision problem. Researchers caution the work is still very preliminary.

"This study provides reason for encouragement, but plans to now get such a treatment would be premature," said stem cell expert Paul Knoepfler of the University of California, Davis, who had no role in the research.

Last summer, each patient was injected in one eye with cells derived from embryonic stem cells at the University of California, Los Angeles. One patient had the "dry" form of age-related macular degeneration, the most common cause of blindness. The other had a rare disorder known as Stargardt disease that causes serious vision loss. There's no cure for either eye problem.

After four months, both showed some improvement in reading progressively smaller letters on an eye chart. The Stargardt patient, a graphic artist in Los Angeles, went from seeing no letters at all to being able to read five of the largest letters.

However, experts said the improvement of the macular degeneration patient might be mostly psychological, because the vision in her untreated eye appeared to get better too.

Both patients remain legally blind despite their improvements, said experts not connected with the study.

"One must be very careful not to overinterpret the visual benefit," said Vanderbilt University retina specialist Dr. Paul Sternberg, who is also the president-elect of the American Academy of Ophthalmology.

The findings were published online Monday by the journal *Lancet*. This early test was meant to study whether the stem cell therapy was safe in people and not whether it would improve vision.

Scientists at UCLA and Advanced Cell Technology, which funded the work, said they were pleased that there have been no signs of rejection or abnormal growth months after the procedure.

Embryonic stem cells can transform into any cell of the body. Scientists are hoping to harness embryonic stem cells to create a variety of replacement tissues for transplant, but their use has been controversial because human embryos have to be destroyed to harvest the cells.

The latest news comes two months after Geron Corp. halted its stem cell-based experiment for spinal cord injuries, saying it planned to focus instead on two experimental cancer drugs.

Meanwhile, ACT is pushing ahead with its blindness study. The company said Monday that surgeons in London injected a patient with Stargardt disease last week.