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Stem cell advance may help transfusion supplies

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NEW YORK (AP) — Scientists say they've found an efficient way to make red blood cells from human embryonic stem cells, a possible step toward making transfusion supplies in the laboratory. The promise of a virtually limitless supply is tantalizing because of blood donor shortages and disappointments in creating blood substitutes.

Red blood cells are a key component of blood because they carry oxygen throughout the body.

Experts called the new work an advance, but cautioned that major questions had yet to be answered.

The research, published online Tuesday by the journal *Blood*, was reported by scientists at Advanced Cell Technology in Worcester, Mass., the University of Illinois at Chicago and the Mayo Clinic in Rochester, Minn.

The researchers said the cells they made behaved like natural red blood cells in lab tests, and that their process could be used in large-scale production. The results suggest that embryonic stem cells could someday supply type O-negative "universal donor" red cells for transfusion, they wrote.

Mohandas Narla, director of the Lindsley F. Kimball Research Institute at the New York Blood Center, called the results "a very good start."

Now it will be important to show that the complex lab process really can pump out red cells on a large scale, and that the cells will survive long enough in the human body to be useful, he said. Natural red cells circulate for an average of 120 days.