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IN THE NEWS

Stem cell therapy jumps another ethical hurdle

Two new methods for producing embryonic stem (ES) cells without destroying embryos provide a boost for the technology, tackling the main ethical objection against its use.

The first technique, reported in *Nature* (16 October 2005), involves taking 1 cell from an 8-cell embryo and coaxing it to become an ES cell in culture. The remaining 7 cells don't go to waste, as they go on to produce a normal embryo when implanted. This could open the way for banking cell lines for children who are born from the transferred embryos. "The procedure has been done hundreds of thousands of times, so we know it has a minimal or negligible effect on the embryo," said Robert Lanza, who led the research (*New Scientist*, 16 October 2005).

A second study published in the same issue of *Nature* used a modified form of nuclear transfer. The new twist lies in inactivating a key gene in the donor nucleus. This prevents the development of a placenta so that a *bona fide* embryo is never produced. As one of the authors explained: "...our goal was to create a cellular system unable to establish the basic body pattern of a human embryo but able to generate fully functional ES cells." (*The Scientist*, 17 October 2005)

While it remains to be seen whether these technical advances will satisfy critics, the opening of a stem cell research centre in South Korea shows the strength of support for the technology among potential patients. When the World Stem Cell Hub in Seoul announced that it was beginning patient registration a surge of applications overloaded its web site. "I'm pinning all hopes on this," said one applicant, among the many who have few other options for treatment (*CBS News*, 1 November 2005).

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