

doi: 1038/nrm2311

In the news

CLONED MONKEYS YIELD STEM CELLS

Somatic cell nuclear transfer (SCNT) — in which the nucleus of an adult somatic cell is transferred into an oocyte — can be used to clone macaques and to generate embryonic stem cells (ESCs), report Shoukhrat Mitalipov, from the Oregon National Primate Research Center, USA, and colleagues in *Nature*.

This accomplishment is “like breaking the sound barrier”, says Robert Lanza from Advanced Cell Technology, USA (*Nature*, 14 Nov 2007), and could revitalize the languishing field of cloning. Owing to an inability to generate cloned embryos or ESCs from humans or primates, some researchers, including cloning pioneer Ian Wilmut, have turned to other techniques for deriving ESCs.

Past failures have been, in part, ascribed to the process of removing the nucleus from the oocyte before inserting the donor nucleus. This step is often achieved by visualizing the nucleus with Hoechst dye and ultraviolet light, which harm primate oocytes. To circumvent this damage, Mitalipov and colleagues visualized the nucleus with Oosight, which uses polarized light. This gentler technique enabled researchers to generate cloned macaque embryos for the first time, from which they could harvest ESC lines. However, whereas SCNT-cloned embryos of non-primate species have been brought to full term (as in the case of Dolly), the cloned macaque embryos never matured beyond 25 days when implanted into surrogate mothers.

As a result of fraudulent claims by Woo-Suk Hwang in 2004 about having derived human ESCs using SCNT cloning, the current primate findings were experimentally confirmed by Alan Trounson and colleagues from Monash University, Australia. Having replicated these findings, “we can now move on to consider what might be able to be achieved in humans”, says Trounson (*The Independent*, 12 Nov 2007).

Asher Mullard