

Monkey embryos reported cloned

by Bend_Weekly_News_Sources

Scientists are reporting the first successful use of cloning to produce monkey embryos, which they then used to produce "embryonic stem" or stem cells that potentially could serve to treat diseases. Although several species have been cloned, scientists haven't previously done it with primates. In the research journal *Nature* this week, the researchers reported using a technique called somatic cell nuclear transfer to "reprogram" cells from adult rhesus monkeys into embryonic stem cells. The technique involved injecting the nucleus from an adult monkey cell into an egg cell with its own nucleus removed. The researchers then induced an early-stage embryo called a blastocyst, and teased out and cultivated stem cells. Creating embryonic stem cells through this process has only been done in mice. It is thought that in humans, such embryonic stem cells could be used to treat a variety of diseases without immune rejection, as they could be tailored to individual patients. The scientists, led by Shoukhrat Mitalipov of Oregon Health & Science University, said they generated two embryonic stem cell lines from 304 egg cells taken from 14 rhesus monkeys. Their success with primates suggests this approach might work in humans for the purpose of generating embryonic stem cells derived from individual patients, they said. In a related commentary in the journal, Ian Wilmut and Jane Taylor of the University of Edinburgh, U.K., wrote that such cells have potential not only for treating diseases but for understanding the genetics of disease. "In our haste to use patient-specific cells in therapy," they wrote, "we tend to overlook that they have great value for basic research and drug discovery. For example, such cells could provide new ways to study inherited diseases." An independent team led by David Cram of Monash University in Australia carried out an experimental validation of the research, according to the journal.

Courtesy Nature and World Science staff

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