

## In the news

### ALL CHANGE IN THE STEM-CELL FIELD

“Landmark research [...] by scientists in America and Japan is likely to render plans to clone human embryos redundant in the quest for revolutionary new treatment” (*The Daily Telegraph*, 20 November 2007).

Two groups, one led by Shinya Yamanaka from Kyoto University, Japan, and the other by Jamie Thomson from the University of Wisconsin, Madison, USA, used a cocktail of four factors to reprogramme differentiated skin cells to acquire stem-cell-like characteristics. Tantalizingly, only two of the four factors — [OCT4](#) and [SOX2](#) — were common between the two studies, “raising the extraordinary possibility that just two factors could be all it takes to wind back the clock and turn an adult cell into an embryonic one” (*The Daily Telegraph*, 20 November 2007). “After 12 days in [Yamanaka’s] laboratory clumps of cells grown to mimic heart muscle tissue started beating. [...] The US team [...] created eight new stem cell lines for potential use in research” (*BBC News Online*, 20 November 2007).

“The breakthrough marks the beginning of a new era for stem-cell biology and could be the end for cloning as an alternative way to produce stem cells” (*The Guardian*, 21 November 2007). The news was well received by anti-abortion campaigners, and this work “may have its greatest impact in America, where the Bush administration has set stringent controls on stem cell research” (*The Guardian*, 21 November 2007).

Although, for now, researchers plan to use their findings to study disease processes in the laboratory, reprogrammed cells could ultimately be used in therapy — “genetically matched cells would not be rejected by the immune system if used as replacement tissues for patients” (*The New York Times*, 21 November 2007).

The news brings a much needed boost of confidence to a field that only 2 years ago was plagued by scientific misconduct.

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