

Stem-cell library boosts the case for change

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A fertility clinic in Chicago, Illinois, has announced that it has created a large library of embryonic stem-cell lines – many of them carrying disease genes.

The announcement is significant, stem-cell specialties say, because cell lines carrying disease genes are in short supply and could be useful for studying illnesses with a genetic component. The existence of a large number of such cell lines could increase pressure on President George Bush to change his stem-cell policy, which prohibits federally funded scientists from working on them.

Yury Verlinsky, director of the Reproductive Genetics Institute in Chicago, revealed the existence of the lines at a meeting of the International Society for Stem Cell Research last week. His colleague, Anver Kuliev, says that the group, which has not yet published details, has derived “a few dozen” human embryonic stem-cell lines from normal lines that carry mutated disease genes including those for β -thalassaemia, a condition characterized by defective blood cells, and various chromosomal abnormalities.

Kuliev says his group has become skilled at producing embryonic stem-cell lines, and has access to a unique patient population, because the institute runs a large pre-implantation diagnosis programme. This means that couples attending the clinic for assisted-reproduction services can have their embryos screened for genetic diseases before they are implanted in the mother’s womb. If the screening turns up disease genes, says Kuliev, stem cells are collected from the embryos, with the couple’s consent, and propagated into stable lines.

“Our emphasis is on establishing embryonic stem cells with different genetic abnormalities,” Kuliev adds.

“I think this is highly significant,” says George Daly, a cell biologist at the Children’s Hospital in Boston. “This is a large number of new lines, many representing models of human disease.”

Kuliev says that his group will make the newly created lines available to other researchers, although the terms of these collaborations are still being worked out.

No scientist using federal funding will be able to use the cells, because President Bush’s ruling of 9 August 2001 bars them from using lines created after that date.

This policy has been coming under pressure lately. On 4 June, 58 senators sent a letter to President Bush asking him to revisit it. And on 12 June, Senator John Kerry (Democrat, Massachusetts), who is his opponent in this November selection, took up the issue as part of his campaign.