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Australia Ends Ban on Embryo Cloning for Research (Update1)

By Gemma Daley and Vesna Poljak

Dec. 6 (Bloomberg) -- Australian scientists will be allowed to create human embryo clones for medical research after the country's lawmakers voted to end a four-year ban on the practice.

New legislation legalizes the creation of human embryos through so-called somatic cell nuclear transfer to aid treatments for diseases such as Parkinson's and multiple sclerosis. Lawmakers approved the bill in Canberra today after a rare conscience vote that allowed them to ignore the party line.

Scientists will be allowed to create embryos with the DNA of a person from stem cells using the same therapeutic cloning technology that produced Dolly the sheep and 10 other animals. Stem cells extracted from such an embryo would be genetically identical to the person donating the DNA, as would tissue such as neurons grown from its stem cells. The research is controversial because it could, in theory, lead to human clones.

``Passage of the laws will improve the environment here for scientists, this is what we argued for,'' said Alan Trounson, a professor at Monash University's immunology and stem cell unit in Melbourne who has helped lead IVF research since the 1970s. ``The Australian community is strongly positive and realistic about the potential therapies that I believe will be developed.''

Scientists have lobbied for extended rights on stem cell research since laws introduced in Australia in 2002 restricted them to using only cells from spare embryos created using assisted reproduction technology, such as IVF.

The research has attracted opposition on other ethical grounds because the embryos that are created are destroyed after their stem cells have been extracted. President George W. Bush restricted U.S. research funding on human embryonic stem cells in 2001, saying he was against the destruction of embryos.

`False and Flimsy'

Australia's Prime Minister John Howard opposed the bill, saying science hadn't advanced far enough to warrant new legislation.

``You have to take a stand for some absolutes in our society and I think in the end what we are talking about is a moral absolute and that is why I cannot support the legislation,'' Howard said today.

Liberal Senator Guy Barnett, who has type-1 diabetes and three children, said he couldn't support the laws. ``The promise of cures is false and flimsy,'' Barnett said in an interview in Hobart.

Somatic cell nuclear transfer has been accomplished in numerous animals but not so far in humans. Scientists take a piece of skin from a patient, isolate a cell and remove its nucleus. They then insert that nucleus into an egg cell whose original nucleus has been removed. Under proposed changes, the technique could produce an embryo that is an exact genetic match of the patient and stem cells could be harvested and replicated.

Embryonic Stem Cells

Embryonic stem cells are considered more useful than adult stem cells because they can adapt to every kind of the 300 trillion specialized cells in the human body, according to the Australian Stem Cell Centre.

Adult stem cells are more limited in their ability to replicate other types of cells and typically can only reproduce cells found from where they were harvested, the Melbourne-based Centre says. It oversees research projects with adult stem cells.

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Boon for Biotechnology

The new law may be a boon for biotechnology companies such as Melbourne-based Mesoblast Ltd., said Scott Power, a biotechnology analyst at ABN Amro Morgans in Brisbane.

``Anybody that operates in that space will get the knock-on effect,'' said Power. ``It's more a perception thing.''

Mesoblast, which is developing treatments for repairing bone fractures and cardiovascular disease, works with adult stem cells.

``Embryonic stem cells have been caught up worldwide in an enormous amount of controversy around the creation and destruction of embryos,'' Chief Executive Officer Michael Spooner said in an interview Nov. 10.

Spooner, who supports both types of cells in the interest of advancing science, said adult cells have an advantage because they are already being trialed in humans, giving them a lead on embryonic cells. ``Embryonic stem cells still have a long way to go,'' he said. ``Most people are saying 10 to 20 years.''

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