



# Media release

From the Victorian Minister for Innovation and  
the NSW Minister for Science and Medical Research

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## AUSTRALIAN STEM CELL RESEARCH FORGES AHEAD

Australian stem cell scientists will build on the recent discovery that stem cells can be made from skin cells in a new collaborative research program, Victorian Innovation Minister Gavin Jennings and NSW Minister for Science and Medical Research Verity Firth announced today at BIO 2008 in San Diego (US).

Sydney IVF Limited and the Australian Stem Cell Centre have received \$550,000 from the NSW and Victorian Governments to progress this new frontier of stem cell research.

The Australian scientists will spearhead a program to compare cells generated from skin cells, known as induced pluripotent stem (iPS) cells, with stem cells derived from embryos or from a somatic cell nuclear transfer (SCNT) process using clinically unusable eggs. The scientists hope to develop a routine, repeatable method of making patient-specific stem cells within the nationally approved legislative guidelines.

SCNT uses a patient's own cells to create a source of individually tailored embryonic stem cells. For patients with a specific disease, these stem cells will have unique characteristics that may be used to better understand and treat the disease process.

This pioneering work has only become possible due to the new funding and recent changes to legislation in both Victoria and NSW, opening up opportunities for SCNT research to occur in Australia.

"This important initiative will put Australian scientists yet again at the forefront of stem cell research," said Mr Jennings.

"The promise of pluripotent stem cells is vast because they have the potential to develop into specialised cells that could be used as replacement cells and tissues to treat many diseases and conditions, help us to understand what causes birth defects and cancer and change the way we develop and test drugs," Mr Jennings said.

Scientists from Japan and America made the discovery that stem cell-like cells could be made from human skin cells in late 2007.

Sydney IVF, one of Australia's premier assisted reproduction facility, will undertake the SCNT work in this program. Since 2004, Sydney IVF has obtained five National Health and Medical

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Research Council embryo research licenses and produced over 20 human embryonic stem cell lines.

The Australian Stem Cell Centre, the Biotechnology Centre of Excellence based in Melbourne, will perform the characterisation and comparison of the stem cell-like cells.

“The research talent and significant resources of these two collaborative partners gives this project the potential to provide world-first advancements in these new biological frontiers,” said Ms Firth.

“Both the NSW and Victorian Governments are proud to be supporting this ground-breaking work, which we believe will offer new hope to people living with debilitating diseases such as rheumatoid arthritis, Alzheimer’s Disease and Parkinson’s disease,” Ms Firth said.

Recent US research has turned embryonic stem cells into insulin producing cells in mice, representing a possible cure for type 1 diabetes and there is already proof of concept that stem cells can restore function to damaged tissues in models of Parkinson’s disease and immuno-deficiency.

Victoria and NSW have led the way nationally in stem cell research and are already global leaders in the field.

“Victoria and NSW have now come together to extend our leadership into new stem cell technologies which have the potential to transform how we treat major and growing diseases like diabetes, heart disease, cancer and Parkinson’s,” the Ministers said.

The amended Victorian *Infertility Treatment Act* and the NSW *Human Cloning and Other Prohibited Practices Act* were passed in 2007 and provide a clear regulatory framework for stem cell research.

Minister Firth also announced that in July this year the NSW Government would commence a new program to provide scholarships for PhD research in the area of induced pluripotent stem cells. These scholarships will ensure that Australia continues to develop our researchers at the cutting edge of stem cell technologies. The scholarship program will be named in honour of Dr Paul Brock in recognition of his tireless efforts in promoting innovative research into serious diseases, in particular motor neurone disease.