Cure hopes as cloning goes under microscope

Dr Sidhu ... important step.
Photo: *Steven Siewert*

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A CURE for cancer, Alzheimer's disease and Type 1 diabetes could be found within the next 10 years, once NSW scientists are given the green light to conduct therapeutic cloning, predicts Dr Kuldip Sidhu.

Dr Sidhu is from the Diabetes Transplant Unit at the University of NSW, one of only two stem-cell research bodies in the state.

Dr Sidhu, an associate professor of medicine, said if both houses of the NSW Parliament this week pass the legislation, it would be a "very important" step to eradicating incurable diseases. However, it would be a long and painstaking process, given the technology had been used only on animals.

Somatic cell nuclear transfer, or therapeutic cloning, is when the nucleus of an ordinary cell is implanted in an empty egg.

This creates a human embryo from which stem cells can be extracted in order to produce other cells such as blood cells for leukemia patients, or pancreatic cells for diabetics.

"I would say once we develop it to a stage where we can fuse [the egg and other cell] together that it will take off and within 10 years we should be able to develop disease- and patient-specific [stem cells]," said Dr Sidhu, who was this week called to Parliament to explain some of the more technical aspects of the technology.

Dr Sidhu hopes to be the first researcher in the country to gain a licence for therapeutic cloning.

However, he must wait until federal legislation is enacted on June 12 and then a further three to six months for the National Health and Medical Research Council to create guidelines and an application process.

Another hurdle will be overcoming a shortage of available eggs by convincing fertility clinics to

donate eggs that were immature or failed to fertilise.

The fertility treatment centre Sydney IVF is also planning to begin similar work. Its medical director, Robert Jansen, said people should not expect immediate results. "It's quite a challenge and it's not going to be done next week and we're not going to get an example of it working any time soon," he said.

Professor Jansen said Britain has allowed access to therapeutic cloning for several years, but was yet to clone a human cell. "It's going to be an international effort and we can't at all be sure that it's going to happen first in Australia even."

He said one of the benefits of the technology being approved in NSW would be that it could lead to greater recognition within the community and more funding from the private sector.

However, it was unlikely to lead to more researchers in the area as most IVF programs did not have the research expertise.

"Potentially, there are more and more philanthropic organisations that want a particular focus on an area of promising disease treatments, and stem-cell research is certainly high profile," Professor Jansen said. "A clear majority of the community have been in favour of IVF over the past 20 years and the same substantial majority ... are in favour of stem-cell research and now therapeutic cloning as well - that's a very important step forward for the community."

Dr Sidhu agreed, saying the time for debate about the ethical elements of therapeutic cloning had passed given the exhaustive debate that occured during the 2004 Lockhart review for Federal Parliament.

"From my perspective as a scientist, once we have debated that thoroughly and we understand the technology," he said. "I would not go back and discuss the issue of morality again, though I do respect the other viewpoint."