

Letter by Dr Robert Pollnitz to the *Lockhart Review* on behalf of the Commission on Social & Bioethical Questions, regarding the *LOCKHART REVIEW OF HUMAN CLONING AND HUMAN EMBRYO RESEARCH*

5th September 2005

Lockhart Review
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**RE - LEGISLATION REVIEW OF PROHIBITION OF HUMAN CLONING ACT 2002
AND RESEARCH INVOLVING HUMAN EMBRYOS ACT 2002**

Thank you for the invitation to make a submission to this review.

*In my work as a consultant physician I have followed the development of these bioethical issues with interest. I believe that the prohibitions in both these Acts remain relevant in 2005-06, and that these prohibitions continue to reflect community standards in this area. I read in *The Australian* of 29 August 2005 page 5 that the great majority of submissions you have received are from people who are opposed to human cloning and to any extension of destructive research on human embryos.*

In regard to the prohibition of human cloning, I submit that –

1 – Australia has taken an ethical stand in prohibiting all forms of human cloning. It is not in line with community standards to create a human life by any means with the intention of destroying it. In taking this stand we are in line with many other nations, with the United Nations vote of March 2005 banning all forms of human cloning being passed by 84 to 34 votes. Similarly we are in line with the resolution of the European Parliament.

2 – Nothing in the experiments on human cloning in Korea and elsewhere has developed a successful therapy or even shown the likelihood of one. (The now discredited Korean trial allegedly needed hundreds of human eggs to clone each human embryo). UN delegates from developing countries raised concerns in March about the exploitation of women induced to donate their eggs, and the health risks involved in ovarian stimulation prior to egg collection.

3 – In the three years since our Acts there has been no scientific evidence that human embryonic stem cells can be used in safe and effective treatments. Problems with immune rejection and with excessive plasticity (lack of stability) and with tumour formation have persisted.

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4 – The definitions in the Acts should be retained. Some scientists appear to be using misleading language, for example in implying that somatic cell nuclear transfer differs from cloning.

In regard to research involving human embryos, I submit that –

1 – The entire 2001-02 debate about the use of so-called excess human embryos was centred on the potential of human embryonic stem cells for treatment. No line of treatment has been developed, and only 150 of the 1735 human embryos for which research licences have been issued mention stem cell therapy as their intention.

2 – While there have been zero successes for human embryonic stem cell therapies, since 2002 there have been major advances in the use of mature stem cells for therapy in humans (mature meaning from umbilical cord blood on to adult stem cell sources). There are now about 65 disorders where benefit has been achieved using mature stem cells (see www.stemcellresearch.org).

3 – The claim that human mature stem cells are less useful than human embryonic stem cells appears to be false, with multiple studies showing that mature stem cells are as easy to obtain, as easy to culture and as potent as embryonic stem cells. Prof Mackay-Sim in Australia has demonstrated this with nerve (glial) cells taken from the lining of the human nose. Researchers in the USA have recently shown that stem cells derived from umbilical cord blood and from the amnion of the placenta (after birth) appear to be as pluripotent as human embryonic stem cells. Similarly adult cell reprogramming by fusing an adult cell with an existing embryonic stem cell promises to be another way forward without the ethical problems inherent in the further destruction of human embryos.

4 – Given the promise of stem cell technology in treating many disorders, I support the development of a national stem cell bank. Australia can move into this potential billion dollar market in an ethical and effective way by focussing on mature stem cells as above.

Accordingly, I submit that the prohibition of human cloning laws should be maintained without amendment, and that the research involving human embryo laws should continue to prohibit using excess IVF embryos created after April 2002.

Please keep me on your mailing list for any reports that arise from your review.

Yours sincerely,

DR ROBERT POLLNITZ