Submission to the Senate Community Affairs Committee

Inquiry into the Legislative responses to

Recommendations of the Lockhart Review

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In 2002 Australian Federal, State and Territory governments unanimously agreed to recognise the truths of the development of human life and to uphold ethical standards in stem cell research.

Since then the truths, and the desire for high ethical standards have not changed.

But a strong campaign has been mounted. A campaign of pressure and persuasion by medical scientists and powerful commercial interests, to diminish the importance of both.

We submit that wise judgment calls for a rejection of the proposed changes and the Bills which allow them.

Senators Kay Patterson and Stott-Despoja are pressing for the creation of human embryos and human embryo clones, and human/animal mix embryos, for experimentation in the laboratory.

This signals a radical shift since the 2002 debate on the subject when they spoke strongly about the undesirability of such procedures in the following words:

'I believe strongly that it is wrong to create human embryos solely for research. It is not morally permissible to develop an embryo with the intent of truncating it at an early stage for the benefit of another human being.'

'I believe it is disingenuous to suggest that approving this research will open the door to further killing of living human beings when the Prohibition of Human Cloning Bill 2002 bans the creation of a human embryo for a purpose other than achieving a pregnancy... The establishment of a national regulatory regime in no way heralds an increasingly liberal attitude to research involving human embryos. Nor does it represent the first step on the slippery slope towards human cloning.'

(Senator Kay Patterson - Senate Hansard, 12 Nov, 2002)

'nightmarish allusions to Frankenstein and half-human, half animal clones have no place in this debate'.

(Senator Stott-Despoja - The Australian 17/8/2002)

In the way that water wears away rock as it runs across it, continuing pressure has been exerted by some medical scientists and vested commercial interests, to persuade politicians and others that the importance of their work and ambitions override ethical and moral imperatives.

It would seem that, in the case of some politicians, their campaign has worked.

The proposals in the Bills that

- more existing human embryos be available for experimentation,
- human embryos, human embryo clones and
- human/animal mix embryos, be created for the purpose of experimentation,

are diametrically opposed to the unanimous decision not to approve human cloning arrived at by Federal and State Governments in 2002.

These procedures are out of step with human values, unacceptable in a civilized society and constitute a degradation of humanity.

We note that, with Australia's support, the General Assembly of the United Nations has adopted the Declaration on Human Cloning, by which Member States are called on to adopt all measures necessary to prohibit all forms of human cloning inasmuch as they are incompatible with human dignity and the protection of human life.

We dispute the claim in the Lockhart Review Committee Report Executive Summary xvi (Executive Summary), that the present laws include a sunset clause, defined as a provision that terminates or repeals all or portions of the law after a specific date, unless further legislative action is taken to extend it.

There is simply a review requirement. The review having now been conducted and a report delivered, there is no requirement for legislative change.

Senators Patterson and Stott-Despoja's Bills use the red pencil to strike out the long standing scientific definition of the human embryo.

In the proposed legislation, the definition of a human embryo has been changed from coming into being at the time of syngamy, when fusion has occurred between the chromosomes of the sperm and those of the ovum, to the time of the first cell division.

This strips this new human entity of legal recognition and protection prior to the first cell division. The Bills contain no provision for regulating or monitoring any experimentation at this stage of development.

Changing to a new definition establishes the precedent for further changes to the definition and extension to still later stages of maturation.

The risk is that the technological and business imperatives will roll over any boundary set.

'Using cloned embryos to investigate the basis of disease in adults and children will often, if indeed not always, require that the embryos undergo maturation. Just a couple of years ago, would be cloners told us that permitting cloned embryos to mature was exactly the line they would never cross.'

James Sherley, Ph.D. Assoc Prof of Biological Engineering, Massachusetts Institute of Technology.

Australia's proud record in adult stem cell research

The Australian Government's Invest Australia publication entitled "Australian Biotechnology number one in the Asia Pacific for biotechnology investment" reports that

"Ernst & Young ranks Australia as the number one biotech country in the Asia-Pacific and sixth worldwide in its global biotech census. This is because Australia has a critical mass of international biotechnology organisations, which are generating 67 per cent of total public biotechnology revenues for the Asia Pacific region."

"With a population of just over 20 million, Australia has only 0.3 per cent of the world's population yet we produce 3 per cent of the world's medical research. Australia is in the top five countries (with population 20 million or more) in terms of availability of R&D personnel. Australia also has a greater availability of scientists and engineers than the UK, Singapore and Germany."

Yet some argue that without human cloning and embryonic stem cell research, Australia is unable to compete internationally, and that our brightest scientists will go overseas.

Harvesting of eggs and the health of women

We have grave concern in the matter of harvesting of human eggs and the lack of information on possible consequences for women's health.

This is an invasive procedure involving some risks, and the long term effects on women and their children are unknown

Studies are currently being conducted on the link between cancer, particularly ovarian cancer, and drugs which induce hyper-ovulation for egg harvesting.

Several papers suggesting possible links have been published

Furthermore there are concerns about the targeting of poor women and women from third world countries, by unscrupulous operators. We are aware that the required supply of human eggs for the suggested purposes is very great.

Australian women and their children depend upon legislators to pass laws which guarantee their health and safety, and take into account the welfare of our sisters in other parts of the world.

Adult stem cell research successes

Stem cells hold enormous promise for the development of new therapies for a wide range of conditions.

Procedures which involve the use of adult stem cells have been part of the armory of medical scientists for many years and have produced wonderful results. In addition, stem cells derived from placentas and umbilical cord blood are also offering promising prospects.

- In February 2002 American scientists found that fat cells have the potential to be reprogrammed to turn into bone or cartilage cells. All in all, there are now over 400 published papers documenting the success of ASCs.
- In November of 2001 it was reported that human adult bone marrow stem cells can be grown in culture for extended periods of time and still retain the ability to differentiate into multiple cell types.
- In July 2001 German doctors reported that a patient's own ASCs from bone marrow were used to regenerate tissue damaged by a heart attack.
- Surgeons in Taiwan restored vision to patients with severe eye damage using stem cells from the patient's own eyes.
- British scientists found that adult stem cells in bone marrow can turn into liver tissue, which can be used in new treatments for liver damage.
- In mice, stem cells from bone marrow have developed into brain cells and heart cells.
- In the UK a three-year-old boy has been cured of a fatal disease by the use of stem cells extracted from his sister's placenta.
- In April 2006 surgeons at the Royal Melbourne Hospital performed the world's first implant of cultured cells in an orthopedic patient. *ABC Online*
- July 2005 An Australian Scientist's discovery that adult stem cells can be found in the uterus and used to grow extra bone, muscle, fat and cartilage has been hailed a major medical and scientific breakthrough. *AAP*
- August 19, 2005, headline: "Umbilical stem cell breakthrough". The Australian
- August 23 2005, headline: "Stem cell hope takes heat off embryos". The Age

The actual cures or therapies resulting from adult stem cell use are many:

- -autoimmune diseases (such as multiple sclerosis, lupus, juvenile and rheumatoid arthritis)
- -stroke
- -immunodeficiencies
- -anemia
- -Epstein-Barr virus infection
- -corneal damage (with full vision restored in most patients)
- -blood and liver diseases
- -osteogenesis imperfecta
- -various cancers (in conjunction with chemotherapy and/or radiation)
- -heart attack
- -cartilage and bone damage

Appendix 2

Language

Clear language is essential and public discussion can be confused, even manipulated by the use of euphemisms, with the result that the truth is not revealed.

We note that;

- Cloning creates a human embryo.
- SCNT (somatic cell nuclear transfer), is cloning by a different name.
- The processes of therapeutic and reproductive cloning are the same. The difference is in whether it is intended that the embryo so created is implanted and continues on to birth, or used for experimentation and destruction.