SUBMISSION ON BEHALF OF

DON'T CROSS THE LINE

TO

THE SENATE
COMMUNITY AFFAIRS COMMITTEE

INQUIRY INTO THE LEGISLATIVE RESPONSES TO RECOMMENDATIONS OF THE LOCKHART REVIEW

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INTRODUCTION:

The Senate Committee of Enquiry into the Lockhart Review and Report is centred on the fundamental question of therapeutic cloning. For want of a more precise descriptor, therapeutic cloning is referred to as somatic cell nuclear transfer (SCNT). This descriptor, of course, arguably has two purposes; firstly, it moves the debate away from what may be seen as an overly emotive term 'cloning' and secondly, it purports to involve no human developmental characteristic in the resultant entity, that is, the cloned embryo.

To the extent that the descriptor is successful in fulfilling the two purposes stated above, then the public debate will be the less informed as to the true issues.

This submission will concern itself with the societal and ethical dimensions of the central issues in the Legislative Responses.

WHAT ARE THE ISSUES:

For the purpose of this submission the issues considered are:

1. Is the term 'therapeutic cloning' understood by society to mean the making of a cloned human embryo';

2. Does the procedure involved in somatic cell nuclear transfer (SCNT) result in the making of an embryo with dividing cells similar or identical to an embryo created by the union of female ova and male sperm;

3. If cloning by the SCNT method produces a cloned human embryo, then what are the ethical lines that society will be asked to cross; and

4. Does redefining the embryo change anything?

1. WHAT DOES THERAPEUTIC CLONING MEAN

1.1 There are various concepts of cloning[1]:

1.1.1 Human Cloning (what it is): The asexual production of a new human organism that is, at all stages of development, genetically virtually identical to a currently existing or previously existing human being.

1.1.2 Human cloning (how is it done): It would be accomplished by introducing the nuclear material of a human somatic cell (donor) into an oocyte (egg) whose own nucleus has been removed or inactivated, yielding a product that has a human genetic constitution virtually identical to the donor of the somatic cell. This procedure is known as "somatic cell nuclear transfer" (SCNT).

1.2 The Legislative Responses to the Lockhart Review propose to produce cloned human embryos through the fusion of a somatic cell into ova that has had its nuclei removed.

1.3 The somatic cell would be taken from a person who is suffering the disease or damaged spinal cord and fused with human ova or animal ova (hybrid), this method called somatic cell nuclear transfer (SCNT).

1.4 The resulting entity (cloned embryo) would be a virtually identical replica of the somatic cell donor in its genes structure and hormones.

[1] The following concepts are taken from: Human Cloning and Human Dignity: The Report of the President's Council of Bioethics, BBS Publication 2002, p.62.

1.5 It is argued that the stem cells harvested from the cloned embryo can be cultured and be differentiated in order to replace or repair the diseased or damaged organs and or tissues of the donor.

1.6 Whatever promise such research holds out and irrespective of the excitement such study may arouse, caution should be exercised '… *because so much of biomedical science is exploratory and experimental, … often involving research on living subjects, including human beings."* [2]

1.7 The push towards therapeutic cloning is gathering momentum due to the failure of embryonic stem cell research to fulfil its (previously) stated hopes to find cures.[3]

1.8 Why the term therapeutic cloning is used is not altogether clear in the public arena. Cloning is understood to mean the virtually identical replica of a given person.

1.9 The descriptor 'therapeutic' is presumably intended to mean that a therapeutic benefit will emerge from the cloning of the embryo.

1.10 Clearly, no therapeutic benefit can result for the human embryo as the sole purpose for its production is to harvest its stem cell and the embryo will be destroyed in the process.

1.11 Any therapeutic benefit to the somatic cell donor has hitherto no medical or scientific basis.[4]

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[2] Human Cloning and Human Dignity: See note 1 above, p.14.
[3] Teruhiko Wakayama, Nature Biotechnology Vol. 22 No 4 April 2004, stated, *"ES cell technology does not hold great promise over the long term."* p.400
[4] Human Cloning and Human Dignity: See note 1 above, pp 70-71.

1.12 Indeed, there is some but little or unproven therapeutic benefits demonstrated in animal research.

1.13 Biomedical researchers and scientists should be encouraged to totally explore the hazards of experimentation on animal cloned embryos and not cross the ethical lines by engaging in what may be scientific adventurism on human cloned embryos.

1.14 The Report of the President's Council on Bioethics provided a prescient comment[5] (United States President's Council):

> *While there is almost universal opposition to cloning-to-produce-children, the prospect of using cloned embryos in biomedical research has attracted significant support in the general public and among many scientists, patient advocacy groups, and policy makers. It therefore presents more complicated moral and policy challenges, and requires serious reflection on the duty of society to those of its members who are suffering, as well as its responsibility for nascent life. The precise character of both that duty and that responsibility is a subject of long-standing dispute, giving rise to a contentious but very important public debate*.

1.15 The leader of the team that produced 'Dolly the Sheep' by the SCNT cloning method, Ian Wilmut, gave evidence to a US Senate Committee one month after the arrival of Dolly in March 1997 and said[6]:

> *Our own experiments to clone sheep from adult mammary cells required us to produce 277 'reconstructed' embryos. Of these, 29 were implanted into recipient ewes, and only one developed into a live lamb. In previous work with cells from embryos, three out of five lambs died soon after birth and showed developmental*

[5] Human Cloning and Human Dignity: see note 1 above, p.17.
[6] Human Cloning and Human Dignity, see note 1 above, p.34.

abnormalities. Similar experiments with humans would be totally unacceptable.

1.16 The caution expressed by prominent persons gives an a priori case why we should not progress to producing cloned human embryos for experimentation in addition, an a fortiori case arises due to the presence of nascent human life in the cloned human embryo.

1.17 The Senate Committee will undoubtedly turn its mind as to where and how female ova will be obtained to facilitate the SCNT research and study.[7]

1.18 In the alternative, if the Senate Committee is of a mind that a hybrid human clone can be produced in order to facilitate the SCNT research and study, then the issue is whether society is prepared to accept crossing this ethical line in making an embryo with nascent human life in an animal egg.

2. DOES SCNT PRODUCE AN ORGANISM EQUIVALENT TO AN EMBRYO CREATED BY THE UNION OF FEMALE OVA AND MALE SPERM

2.1 Cloned Animals embryos such as cows and sheep have been brought to life through the SCNT procedure.[8]

2.2 A cloned human embryo from the moment of fusion by the SCNT procedure must, to be of any potential value, behave in a similar manner to a human embryo created through a union of human female egg and human male sperm.

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[7] Teruhiko Wakayama, see note 3, relying on research data of the now discredited Professor Hwang, acknowledged at p.400, *"that only patients possessing a supply of healthy oocytes could benefit from therapeutic cloning"*. This should be read in light of information since the time that there was no success from human cloning of embryos which obviously means the necessity of large numbers of oocytes to even continue with the SCNT research and study. Wakayama earlier had stated, *"(that)…the scarcity of human oocytes presents a formidable obstacle"*.

[8] JB Gurdon and Alan Colman, Nature Vol 402, 16 December 1999 p.746.

2.3 To do otherwise would not progress the cloned human embryo to the blastocyst stage thus not producing any stem cells.

2.4 The cloned embryo is therefore nascent human life upon the fusion of the somatic cell with the ovum albeit with the nuclei removed.

2.5 The cloned embryo of the somatic cell donor and if implanted – it is acknowledged that this is not intended – into a womb would reproduce the virtually identical copy of the somatic cell donor if brought to life.

2.6 Gurdon and Colman state that the SCNT human cloned embryo could "probably"[9] be brought to life if gestated in the appropriate circumstances.

3. THE ETHICAL ISSUES

3.1 The SCNT cloned human embryo is nascent human life.

3.2 Therapeutic cloning offers hope for many suffering human beings.

3.3 No credible stem cell researcher, or study or medical report has made claim to producing a human clone.

3.4 Animal studies over many years clearly demonstrate the immense difficulties of yielding conclusive results although some promise has been stated.

3.5 Clearly, research on cloned animals and cloned animal embryos are to this time uncertain.

3.6 Even if research on cloned animals and cloned animal embryos did yield positive research no guarantee can by that result alone translate to success on humans.

3.7 Even if success is probable does this circumstance overcome the ethical question as to how society treats nascent human life.

3.8 Does the respect and dignity of a suffering human person, however severe, trump the dignity of nascent human life.

3.9 Ethic questions of this magnitude cannot be answered on the strength of hope, more considered and extensive public debate and information is required.

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[9] See Note 5 above. Also see Human Cloning and Human Dignity, note 2 above, at pp 73 and 74.

4. DOES REDEFINING THE EMBRYO CHANGE ANYTHING?

4.1 The Legislative Responses to the Lockhart Review seek to redefine the human embryo.

4.2 The intending redefinition does not overcome whether the cloned embryo is nascent human life or is merely a human cell devoid of human reproductive capacity.

4.3 It is the belief that the cloned embryo is nascent human life that creates the ethical line that should not be crossed.

4.4 The proposed research on stem cells harvested from cloned embryos is unique and must be distinguished from research on stem cells harvested from surplus IVF embryos.

4.5 IVF embryos are produced with the intention of implantation and thus the prospect of live birth.

4.6 Cloned embryos are to be made for no other purposes than to be destroyed.

4.7 Such a proposal is given a leap and raises serious and genuine ethical question on the dignity of nascent human life.

4.8 A redefinition of the embryo is frankly an attempt to avoid the real debate.

In conclusion, I would be pleased to support the above submission with verbal evidence on any of the planned hearing dates.

Yours sincerely,

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Convenor
Don't Cross The Line