SUBMISSION of the
CAROLINE CHISHOLM CENTRE for HEALTH ETHICS, East Melbourne,
to the HOUSE OF REPRESENTATIVES STANDING COMMITTEE on
LEGAL and CONSTITUTIONAL AFFAIRS
REVIEW of AHEC's REPORT on
SCIENTIFIC, ETHICAL AND REGULATORY CONSIDERATIONS RELEVANT TO THE CLONING OF HUMAN BEINGS

BASIC PREMISES

Our Centre believes all human life is ethically inviolable and should be legally protected from conception. This belief is not merely based on the Bible or purely religious convictions on the sanctity of human life. Reason alone is able to recognise harmless human life, empirically identifiable from conception, as a basic and inviolable value not only for adults but also for children, newborns, fetuses and embryos. Without human life, the values we cherish and protect would not be attainable. We have no moral right to deliberately destroy innocent human life.

Many people hold the early human embryo is a human individual, a human being and a person, even if not in the legal sense of a live born infant. Where there are reasonable grounds to believe the human embryo is a human individual, ethical principles require the benefit of the doubt be resolved in favour of absolute respect to human embryos from conception.

Accordingly we are opposed to all non-therapeutic, destructive or harmful research on human embryos, regardless of their derivation -- naturally conceived embryos, IVF embryos or cloned embryos. We are aware that in no Australian state is there an absolute ban on destroying human embryos, although in several states destructive use and/or research on human embryos is quite restricted. We regret the lack of a legal ban on all non-therapeutic and destructive human embryo research in Australia, although some states do guarantee legal protection to human embryos in most circumstances.

Human Cloning

We agree with AHEC's opposition to human reproductive cloning. Unlike forming offspring using IVF, cloning a child would be contrary to natural justice and human dignity. It would deprive the child of the genetic basis of father, mother and other family relationships which are very significant and important for every human individual's since these pertain to the core of our personal identity in the general community. Naturally occurring embryonic fission results in identical twinning and is quite unlike the fusion of a somatic cell nucleus with an enucleated egg: identical twins have a genetic father and mother and other family relations and they are not formed as a result of a person's arbitrary exercise of power. Even if a cloned child were to be born, most likely there would be unreal and scary expectations placed on the cloned child to conform to the nuclear donor source parent and this would constitute harassment for the growing child.

A cloned human child would be a human individual, a person, a subject and not an object. No cloned fetus or child should be created or used as a mere means for the benefit of others (e.g. source of tissue for transplants).

Totipotency and the Definition of a Human Embryo

(*For details see article published by our Centre in the Appendix which is an integral part of our submission*)

It is crucial to have a definition of *human embryo* that applies to all human embryos, regardless of their origin. This is necessary to ensure embryos are given due respect and protection and also to avoid giving legal protection to cells that are not embryos. Clarification is needed since an inconclusive reference was made to this issue in AHEC's Report 2.19 and 2.20 when dealing with the topic of *Embryos and Embryonic Stem Cells*.

Reflection on the process of typical human development from fertilisation onwards suggests the following definition of a human embryo: *a cell, or group of cells, which has the inherent (intrinsic) active capacity to continue organised species specific human development, given a suitable environment*.

Clearly, the product of an unsuccessful attempt at fertilisation that is inherently incapable of human development from the start is not an embryo. Hence if the fusion of two gametes is unable to form a new cell at syngamy, fertilisation would have failed, new human life would not have begun and an embryo would not have been generated.

It is sometimes said that all totipotent cells are embryos. This needs clarification. An embryo is said to be totipotent if it is inherently capable of producing the entire offspring, including the blastocyst. This is the strong sense of the term *totipotency* and it provides grounds for the moral status of an embryo. An isolated cell from a four- or eight-cell embryo should be regarded and treated as a distinct embryo whereas one from a 16- or 32-cell embryo would not. This would be ethically relevant to embryo biopsy in preimplantation genetic diagnosis. Put simply a non-totipotent embryonic cell, cloned or otherwise, is not really a human embryo. Isolated ES cells likewise are not embryos.

In a weaker sense, *totipotency* can also refer to the capacity of the progeny of one or more cells to become all types of cells in the offspring. This could apply to a cell taken from a 16-cell embryo and inserted into the inner cell mass of a blastocyst to form a human chimaera. This cell's derivatives could be found throughout the whole human chimaeric fetus and offspring. This is not a morally relevant meaning of the term *totipotency* for a single cell. Totipotent cells in this weaker sense should not be deemed embryos. Cells are also said to be *pluripotent* if their cell progeny can give rise to many, but not all, cell lines of an offspring. Pluripotent cells are likewise not embryos.

COMMENTS ON AHEC'S REPORT

In making our submission to this review of AHEC's Report, we would like to commend AHEC for its fine work, and except for any reservations made in this submission, we endorse the Report's recommendations and resolutions.

Recommendation 1

We agree with this recommendation, but think it should be more specific to include a legislative prohibition against cloning human embryos, human fetuses, children and adults. It should not be presumed this is unnecessary.

Recommendation 2

> We agree with this recommendation, but believe it should have gone further to include a review of Sections 6.2 and 6.4 of the NHMRC's *Ethical guidelines on assisted reproduction*. These sections permit destructive research on human embryos in some circumstances, which we think is ethically unacceptable.

Recommendation 3

We agree with this recommendation. Clearly, if destructive human embryo research is legally permissible under certain conditions, or not legally forbidden, it needs to be regulated by a statutory authority to minimise the risk of the abuses and excesses.

Recommendation 4

We agree with this recommendation because contentious ethical issues concerning human embryos will have no hope of resolution without informed community discussions, which, hopefully, will lead to enlightened legislation and regulation of human embryo research, including cloned human embryos.

Resolution 1

We agree with this Resolution for AHEC to collect information on research involving the application of cloning techniques to human embryos from IECs in States and Territories without the relevant legislation for artificial reproductive technology (ART) -- until such legislation is enacted.

Resolution 2

We likewise agree with this resolution to enable IECs in States and Territories without any ART legislation to have recourse to an expert advisory committee for assistance re scientific aspects of research projects involving the application of cloning techniques to human embryos.

MEDICAL BENEFITS OF CLONING

The medical benefits of the use of cloning technology, as distinct from cloning embryos, are well documented.[1] Cloning technology may be ethically used for gene therapy, autologous transplants, e.g. stem cells for blood, bone marrow, neuronal tissue etc. We do not support unethical methods of obtaining these benefits, e.g. destruction of embryos, including blastocysts to obtain Embryonic Stem (ES) cells from which stem cells for blood or cardiac muscle may be derived .

If ES cells are really needed, we recommend, however, that the Commonwealth make funding available for research into ethical ways of obtaining ES cells that avoids destroying or cloning human embryos. This could be done ethically by partially de-differentiating somatic cell nuclei and by arresting the process before the totipotent stage. By using the same process, it may be possible to obtain neuronal or muscle stem cells. Alternatively, funding could be provided to facilitate identifying and isolating how to find the medically beneficial stem cells already in the human body.

PRACTICAL IMPLICATIONS

If the Commonwealth, States or Territories were to make new laws in respect of human cloning, legislation should only contain basic ethical principles and provisions that are unlikely to become out of date within a few years due to scientific and technological advances. This means the Commonwealth, States or Territories should have their own Statutory Regulatory

Authorities with power, subject to their relevant Ministers, to interpret the legislation and to control new developments within the parameters of the relevant laws -- Commonwealth, State or Territory, if they do not already exist with these powers.

We recommend the Commonwealth seek a way of prohibiting private funding for research on human cloning and embryos outside the NHMRC *Ethical guidelines on assisted reproductive technology*.

APPENDIX to
SUBMISSION OF CAROLINE CHISHOLM CENTRE FOR HEALTH ETHICS

Dr Norman Ford SDB, 'Is every Isolated Embryonic Cell an Embryo?', *Chisholm Health Ethics Bulletin* 5/2 (1999) 1-4.

END NOTES

1. Alan Trounson and Kim Giliam, 'What Does Cloning Offer Human Medicine', *Today's Life Science* March/April (1999) 12-14; A Trounson and M Pera, 'Potential benefits of cell cloning for human medicine', *Journal of Reproduction, Fertility and Development*, 110 (1998) 121-253; Alan O Trounson, 'Cloning: potential benefits for human medicine', *Medical Journal of Australia*, 167 (1997) 568-9