

***Ethical, Scientific and Legal Issues Concerning Stem Cell Research:  
Opinion. Professor Andrew Green's Speaking Notes***

**Introduction:**

- Few scientific issues today are as potentially promising and simultaneously controversial as stem cell research.
- The pace at which developments are occurring is astonishing. It is, therefore, essential that the legal and ethical issues associated with this research be addressed.
- For this reason, the ICB has spent 18 months preparing an Opinion document on this important topic. This Opinion document sets out in some detail the scientific basis of stem cell research. It considers the ethical issues in light of scientific advances and outlines the current legal situation in Ireland and internationally.

**The main findings of the Council's Opinion document are as follows:**

- The Council recognises and is supportive of the valuable research with adult stem cells that is currently being conducted in Ireland and abroad, once it is conducted in accordance with relevant legislation and ethical guidelines.
- The Council welcomes the recent breakthroughs in which scientists have shown that skin cells can be reprogrammed to an embryonic-like state. These cells have been termed induced pluripotent stem cells (iPS). This technology holds great promise for creating stem cells for both research purposes and possible longer-term therapeutic use. The scientists involved in this work have pointed out that there are a number of challenges, which have to be met before iPS cells can replace embryonic stem cells. The Council recognises that this is a matter that may have to be revisited as the science progresses.
- The Council considers the embryo to have significant moral value, based on the fact that the embryo has the potential to become a person and represents human life at its earliest stages. However, we do not consider the embryo to have the same moral status as those already born.
- Respect for human life requires that we show respect for human embryos but it also means considering the plight of those who are suffering from serious disease, who could potentially benefit from stem cell research. The Council believes that the moral value of human IVF embryos, that will otherwise remain frozen or be destroyed (*i.e.* supernumerary embryos),

needs to be balanced against the moral value of those members of society who are suffering from debilitating illnesses. Therefore, the Council supports the carefully regulated use of *in vitro* fertilisation embryos, that are otherwise destined to be destroyed, for the purposes of embryonic stem cell research aimed at alleviating human suffering.

- It is the view of the Council that a failure to provide a comprehensive and cohesive regulatory system to govern stem cell research and its application undermines the moral value of the human embryo. It may also hinder developments in this field of research in Ireland. Thus, the Council recommends the establishment of a state funded regulatory authority, which would be tasked with overseeing persons/premises/activities working with human embryos or human embryonic material. The authority should also provide practitioners with codes of good practice and accessible information for the public.
- The Council does not think that the creation of embryos specifically for research purposes is currently justified or represents a proportional response while supernumerary IVF embryos exist. The Council has adopted this view based on the need to avoid the instrumentalisation of embryos and women as well as taking into account the current technical limitations of somatic cell nuclear cloning (therapeutic cloning).
- Should IVF processes become more efficient with a resultant decrease in the availability of supernumerary embryos for research, or if the therapeutic potential of somatic cell nuclear cloning is borne out, the balance of concern over the creation of embryos versus the value to society of such embryos may have to be re-evaluated.
- If the creation of embryos for research were deemed to be acceptable at some point in the future, the Council would have no principled objection to the creation of human-animal hybrid cell lines, which would obviate concerns relating to coercion and exploitation of women.
- If, on the basis of scientific evidence and economic analyses, umbilical cord blood banking were judged to be a useful investment for Irish healthcare, the Council is of the view that storage of such cells should not be left to commercial banks but should be taken in charge by the public sector in order to ensure equitable access to healthcare services for all.
- In the interests of ensuring equitable and affordable access to any medical products/treatments developed as a result of stem cell research, the Council supports adopting measures, which would limit the breadth and/or duration of patents on non embryonic stem cells. The Council is opposed

to the patenting of embryonic stem cells on the basis of protecting human dignity and avoiding undue instrumentalisation and commercialisation of human life.

**Conclusions:**

- It is hoped that this Opinion document will be helpful to policy makers, researchers, medical practitioners and anyone with an interest in the ethical and legal issues raised by stem cell research.
- Finally, on behalf of my fellow rapporteurs Dr Richard Hull and Professor Linda Hogan and myself, I would like to thank our colleagues on the Irish Council for Bioethics who gave generously of their time and expertise in the preparation of this Opinion document.