FEDERATION OF AUSTRALIAN SCIENTIFIC AND TECHNOLOGICAL SOCIETIES

Science and Technology for the Social, Environmental and Economic Benefit of Australia

FASTS Submission

Senate Standing Committee on Community Affairs

Inquiry into the Legislative responses to Recommendations of the Lockhart Committee

Introduction

The Federation of Australian Scientific and Technological Societies (FASTS) is the peak representative body of 60,000 Australian scientists and technologists, including microbiologists, cell and development biologists and reproductive biologists.

FASTS recognises that issues around research involving human embryos are contentious and there are sincerely-held but irreconcilable ethical views.

In summary, FASTS;

- Believes the debate over issues such as ESC research highlights the more general need for well informed public debate and the desirability of clear processes for the social and ethical evaluation of technology;

- FASTS strongly supports continuation of a strong unified legislative and regulatory approach across all States and Territories and public and private sectors as distinct, for example, to the situation that obtains in the USA;

- Supports the ongoing ban on human reproductive cloning and is not aware of any reason or prospect of a reason to mandate a review of that position;

- Notes the high level of research activity and publication in stem cell and related sciences and believes it is premature to close off research options or make determinations on what approaches – eg adult and embryonic stem cell research – will be the most useful;

- believes that ESC research does have exciting potential in deepening our knowledge of cell differentiation and a variety of diseases however we caution that direct or indirect clinical applications from that research are unlikely for 10 years or more; and

- Believes the Lockhart Review of the relevant 2002 Acts was comprehensive and well considered.

Accordingly, FASTS supports the recommendations of the Lockhart Review and recommends that Senators (and Members) support the Private Members Bill introduced by Senator Patterson to enact the recommendations of the review.

Scientific Evidence

FASTS notes that stem cell science is a rapidly burgeoning field. The Lockhart Review incorporates useful summaries of the scientific evidence. We also note that developments are being reported almost literally on a day-by-day basis.[1]

FASTS would like to stress that the rapidity and intensity of the field means that results in both adult and embryonic stem cell research in Australia and internationally, have, in many cases, not been replicated or confirmed (and this is to be expected given the time frames involved). Thus it is premature to make definitive statements about the efficacy of different research or potential clinical techniques. Indeed, the scientific evidence suggests it is highly desirable that a variety of techniques both within and across adult and embryonic stem cell research and other tissue regeneration research programs are supported.

Ethical and social evaluation of science and technology and the language of science

While outside the terms of reference of the Committee, FASTS notes that in the past few decades, there has been growing international public interest and, at times, quite polarized debate over the implications of a range of scientific and technological issues including genetically modified organisms, nuclear waste disposal and, more recently, embryonic stem cell research.

In FASTS view, such debates highlight the need for developing robust public processes to consider and evaluate the ethical and social implications of technology.

FASTS has previously explored and advocated such ideas through, for example, conducting a forum including Parliamentarians, ethicists and scientists at this years' *Science meets Parliament* in March 2006.

It is desirable that outcomes of such public debates and processes should include ;

- A clear understanding and use of language, and
- Appreciation that in the pursuit of scientific knowledge, researchers should have more open regulatory regimes than what might apply to applications of technologies.

[1] Eg *Scientists produce clone from adult cells*, ABC Radio, AM - Tuesday, 3 October, 2006

In FASTS view, the debate over Lockhart recommendations of permitting somatic cell nuclear transfer (SCNT) for research, training and clinical application, but not for implantation into the body of a woman, is a prime example of where greater clarity would be of great assistance.

FASTS does not support the use of the term 'therapeutic cloning' for the reasons outlined in great detail by the (then) head of the Australian Health Ethics Committee (AHEC) Dr Kerry Breen in 2000, that it collapses a) the distinction between therapeutic and non-therapeutic research on embryos and b) the distinction between destructive and non-destructive research on embryos.[2]

FASTS supports the use of the term 'Somatic Cell Nuclear Transfer' (SCNT) or 'nuclear transfer' as so-called 'therapeutic cloning' is misleading. The procedure is not therapeutic in and of itself, nor can the research purposes of SCNT be remotely likened to 'reproductive cloning'.

While it is correct that SCNT can, to a point, be used as both a research procedure and as part of the processes leading to reproductive cloning, FASTS argues there is a clear and compelling difference in intentionality. We note that society makes well understood and robust distinctions – and high status distinctions at that – every day between legal and illegal and ethical and unethical uses of given technologies and/or practices, ranging from use of chemical fertilizers to driving vehicles to medical practices.

Lockhart Review

In FASTS view, the Lockhart Review is comprehensive and well reasoned review of the current legislative framework.

FASTS supports all of the recommendations.

We would like to take the opportunity to explicitly comment on the recommendation to permit SCNT (No. 23) and those relating to the establishment of a National Stem Cell Bank (Nos. 47 – 49).

Somatic Cell Nuclear Transfer

FASTS supports recommendation No. 23 to permit somatic cell nuclear transfer. FASTS notes the finding of the House of Representatives review of 2001 (Andrews Committee) to recommend a moratorium – as distinct from a ban.[3] FASTS believes recent developments in the science warrants liberalising the current legislative framework to

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[2] *Australian Health Ethics Committee – National Health And Medical Research Council: Position On Cloning And Research Technologies*, 15 December 2000, available as an incorporated document, *Senate Hansard*, 7 February 2001, pp. 21477-9

[3] House of Representatives Standing Committee on Legal and Constitutional Affairs (2001). *Human Cloning: Scientific, Ethical and Regulatory Aspects of Human Cloning and Stem Cell* Research, Parliament of the Commonwealth of Australia, Canberra.

permit SCNT for research purposes. We believe that this technique may be very useful in developing disease specific stem cell lines.

National stem cell bank

The requirement for the Review to examine the applicability of establishing a National Stem Cell Bank was an amendment to both Acts in 2002 by Senators Stott Despoja and McLucas.

At the time, the rationale for considering a National Stem Cell Bank took place against a backdrop of assertions in the media and elsewhere about the number of embryos that could be potentially destroyed (70,000 was a common, and highly incorrect figure) and concerns about the commercial behaviours of multinational firms and commercial arrangements of smaller biotechnology firms.

Accordingly, it was felt that a National Stem Cell Bank might

a) minimise the number of embryos required to derive ESC lines, and
b) address concerns that bona fide researchers would not have access to unencumbered stem cell lines.

In FASTS views, these two reasons are not compelling to establish as stem cell bank as the number of excess ART embryos licenced for embryonic stem cell research is thus far, at maximum, 500 (Lockhart, Table 5.2, p 45) and researchers are readily able to access unencumbered ES lines including the two developed by the Australian Stem Cell Centre - Mel 1 and Mel 2.

Nevertheless FASTS supports the creation of a Stem Cell Bank on the grounds that lines accepted to a National Stem Cell Bank will presumably be required to be

a) of high quality,
b) well-characterised, and
c) available for international exchange with other jurisdictions with comparable ethical requirements for the donation of excess ART embryos for research.

In FASTS' view, the Australian Stem Cell Centre – the Australian Government Biotechnology Centre for Excellence – is the ideal relevant Major National Research Facility to run a Stem Cell Bank. Indeed it effectively operates as one currently. Accordingly, FASTS recommends the Government enter into negotiations with the ASCC for the Centre to provide that service as part of its obligations in receiving solid levels of public funding for research.

Legislative Responses – Senators Patterson and Stott Despoja

The Terms of Reference for the Committee go to legislative responses to Lockhart. FASTS notes and welcomes the respective Private Members Bills of Senator Patterson and Stott Despoja.

In our view both adequately address the recommendations of the Review. We have worked on the assumption that the Patterson Bill will be taken as the default Bill for debate. We have not had the time for detailed examination of all the provisions but are not aware of any substantive variations from the intent of Lockhart. Accordingly, FASTS do not wish, at this stage, to offer or recommend any amendments.

CONCLUSION

FASTS supports the recommendations of the Lockhart Review and recommends that legislation to enact these recommendations be supported.

We would be happy to assist the committee if it required detailed scientific evidence or analysis or felt it would be useful for FASTS to appear in relevant hearings.