Elton Humphery
Committee Secretary - Community Affairs Committee

Dear Senators and Mr Humphery

I appeared before the Senate Community Affairs Standing Committee inquiry into the Legislative responses to Recommendations of the Lockhart Review on Friday 20th of October.

I have perused the draft Hansard, and would like to make some supplementary remarks on the issue of the number of licences issued for the purposes of deriving embryonic stem cell lines which was raised on several occasions last Friday, but not, unfortunately, when FASTS was giving evidence (eg Anderson, p. 17. McCullagh, p. 29 and Pike, p. 60).

The following exchange seems representative of concerns:

Senator POLLEY— ... Dr Pike, I appreciate your opening remarks, but I would like to pick up on some of the issues, if I may. Access to human embryos in Australia has been sought on the grounds that stem cells needed to be obtained to produce treatments for diseases like Parkinson's disease and diabetes, spinal cord injury and so on, and yet, in the nine licences issued since 2002, approximately 70 per cent of the embryos used or earmarked for use are in projects that have nothing to do with stem cells. Are scientists really interested in generalised access to human embryos and now cloned human embryos for a range of other purposes? What might those purposes be?

Dr Pike—When those licences were approved, it was at exactly the time that, as you may recall, the public debate was very much in favour of fairly imminent cures for these sorts of conditions. I think that really did influence not only the public but then the parliamentarians, who listen to the public, about what they might do about that. So, at that time, our institute did a bit of a survey to see what uses embryos were put to worldwide. We found an extremely broad use where it was permitted by legislatures or not legislated about at all. That suggested to us that there was a high degree of interest, on the part of some scientists at least, to use embryos for all manner of purposes. So when those licences came out we were somewhat unsurprised to see that over 70 per cent of all embryos earmarked in those licences were for purposes not to do with stem cells and therefore not to do, presumably, with imminent cures. (Committee Hansard, Friday 20 October. 2006, p. 60)

In 2002, excess ART embryos were being sought to derive ESC lines. It is the lines intended for research on disease - and other purposes notably understanding cell differentiation - not the embryos directly.

At that time, scientists argued that the number of excess ART embryos required for that purpose was low. This point was explored carefully during the Community Affairs Committee's 2002 inquiry.

The supplementary report in favour of the legislation by Senators Stott Despoja, McLucas and Webber stated:

How Many Embryos required?
3.57 Recognising that there is an established need for new stem cell lines, the next question - and one that prompted considerable debate during the course of the inquiry - is how many embryos will be required.
3.58 It is likely that the biggest call in the short term will come from IVF Clinics. Professor Jansen advised that hundreds of embryos will be required to develop meaningful results in development of culture medium (52).
3.59 In respect of embryonic stem cell research, there was a very wide range of numbers offered including 20 – 50 (Trounson), 600 – 1000 (Bresagen), through to millions (Good).

It is important to stress that the stem cell scientists argued that the number of embryos required for ESC research would not be high. The figure of millions was made by Professor

Good who speculated that such numbers would be required to address the problem of tissue rejection *in clinical applications* (as distinct from research).

Accordingly, it is completely unsurprising that thus far, the majority of embryos licenced are for ART purposes and that only 500 embryos have been licenced for the purposes of extracting ESCs. If expectations are higher then that is not based based on the actual evidence and statements provided by experts such as Dr Chris Juttner (Bresagen) during the 2002 debates and hearings.

This low number may also reflect the known rigour of the licencing system thus scientists are being very parsimonious in their requests, or possibly not electing to apply for a licence in the first place, but electing to gain access to ESC lines developed by, for instance, the Australian Stem Cell Centre.

As scientists do not need a large range of ESC lines to commence research, it is completely false to draw inferences about the interest in and potential of the research simply based on the number of ethically donated, excess ART embryos that have been licenced for the purposes of deriving ESC lines.

Yours sincerely

Bradley Smith
Executive Director
Federation of Australian Scientific and Technological Societies
FASTS
LPO Box 8283 ANU
ACTON ACT 2601