

# nature medicine

## Turn of the tide

According to an analysis by the US National Institutes of Health, nearly one-quarter of the human embryonic stem cell lines eligible for federal research grants have died or failed to reproduce, *The Washington Post* reported on 3 March. That same day, Harvard University researchers announced that they had created 17 new lines using private funds, and emphasized their willingness to make the cells available to all interested researchers. The contrasting news evokes new criticisms against restrictions that the US government imposes on human stem cell research, and should be a wake-up call to politicians to reconsider the advisability of those limits.

The US government allows experiments with human embryonic stem cells to be funded with federal money only if the cells in question were obtained before 9 August 2001. The position was clearly intended as a political compromise between supporters of the research and opponents of the manipulation of human embryos. But, at its core, the stance is morally inconsistent because it implies that the ethical issues so ardently brandished by antagonists of the work did not exist before that date. More important, although it is undeniable that profound ethical issues surround the debate, it is also clear that the extensive dialogue between opponents and supporters has not brought us any closer to a resolution. If the US government appreciates the importance of this research enough to allow it under certain conditions, why does it so firmly espouse a contradictory policy grounded on ethical issues that might never be settled?

Further pressure on this policy comes from the dismissal of two advocates for research on stem cells from the US President's Council on Bioethics, which advises the president on ethical issues regarding biomedicine and technology. The official explanation for their dismissal is a change in the focus of the council's work. But the decision to replace them with scholars that have publicly criticized abortion and the use of human embryos in research makes it harder to accept the explanation at face value. In contrast to the federal government's conservative decisions, some states are embracing stem cell research (see News, page 320). A recent proposal in New Jersey allocates \$6.5 million in state funds to stem cell work, and a ballot initiative in California, scheduled to take place later this year, asks voters to approve

substantial funding for this kind of research.

If these developments are not enough to persuade the US government that it should abandon or substantially modify its current policy on stem cell research, the sustained progress that other countries are making should be an additional incentive. News that a South Korean group successfully produced human stem cells from a cloned embryo illustrates that some nations are beginning to have a competitive edge over the US in this field. It also underscores the fact that countries such as South Korea, the UK and Israel have gone beyond the ethical discourse and decided to back experiments that others consider immoral. Entirely from a practical point of view, at least, the US government must decide whether it can afford to miss out on the potential therapeutic benefits associated with the study of human stem cells.

It is difficult to imagine that, should stem cell research bear fruit in the clinic, those who could benefit—including those who currently oppose stem cell research—would refuse treatment. This hypothetical situation has fascinating parallels with another perennial debate in biomedical research: antivivisectionism. Although opponents of animal experimentation often strongly condemn this type of work, many of them would be hard-pressed to relinquish the multiple health benefits that have resulted from animal research. Will antagonists of research on human stem cells behave any differently? If stem cell research delivers on its therapeutic promise, will they stand by their convictions?

The US government must respond to the mounting pressures on its conservative policy on human stem cell research and accept that although ethical considerations are relevant to the formulation of research policies, giving them precedence over potential therapeutic benefits can be ill advised. This is particularly true in this case, as the policies that currently regulate stem cell research have internal contradictions, and the ethical dilemmas that restrict it do not seem likely to be resolved soon.

Fortunately, the reactions from scientists, who continue to look for alternative sources of funding, and from those states that are committed to backing this research, make it clear that the lack of federal support—although unfortunate—will not stop the advancement of this field.