Two Cheers for New Stem Cell Rules

Donald Kennedy

The U.S. government has written yet another chapter in the prolonged ethical saga of embryonic stem cells and their use in biomedical research. The long-awaited report from the National Institutes of Health (NIH) establishes guidelines under which researchers may now apply for federal funds to support work on pluripotent stem cells derived from human embryos. The new rules, which follow earlier recommendations from the National Bioethics Advisory Commission, would allow support for work only on cell lines derived from embryos resulting from fertility treatments that would otherwise be discarded. Proposals for experiments on stem cells derived from embryos made solely for research purposes would not be considered.

This result owes much to a strong political coalition that brought health advocacy groups—those concerned with Parkinson's disease and other conditions that might benefit from stem cell research—together with the scientists themselves. Early reactions from the rest of the scientific community have been resoundingly positive and, as expected, anti-abortion groups have been equally quick to decry the prospect of any research on human embryonic cells. But the cheers and the expressions of dismay are both probably premature. The history of this saga is full of twists and turns, and the present political future of this particular chapter looks cloudy for all sorts of reasons.

There are, first of all, questions about whether existing human embryonic cell lines meet the new guidelines. This issue will be considered by an NIH review committee now in the act of being assembled but unlikely to be in full swing until year's end. More important, there is the Congress. For the past several years, a Republican-led majority in the House of Representatives has attached language to the appropriation bill that funds all work at NIH, forbidding the expenditure of its funds on such research. This "rider" must be renewed annually, but Congress has done so in each year since 1996. The next Congress could continue those restrictions—although if the majority changed in the November election, that would probably change as well.

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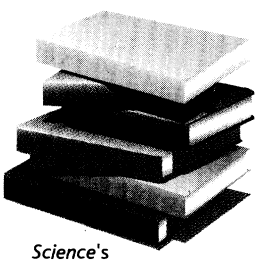
The election will also bring a new U.S. president. Governor Bush, the Republican candidate, has already issued a statement criticizing the new guidelines; President Clinton and Vice-President Gore have both praised them. A new administration uncomfortable with the rule might seize upon the legal opinion offered up by NIH attorneys and reject the distinction it makes between use and production. Or it might seek a statutory solution, or simply require a change in the guidelines at the administrative level. It is therefore not at all certain that the decision issued last week will stick.

Even if the present guidelines were to survive their perilous political journey, there would be scant reason for complacency in the research community. In the view of many thoughtful scientists, the new rules do not go far enough in the right direction. For example, work may still not be pursued supported by federal funds if it uses cell lines created by nuclear transfer into oocytes from somatic cells—even cell lines that were originally created through privately funded research. That process, after all, involves cells never fertilized in the normal way; thus, the prohibition ignores a distinction obvious to most biologists, that between sexual and asexual reproduction. Other societies that are both scientifically sophisticated and morally scrupulous have taken a substantially more permissive path: The British government has recently asked Parliament to enact a law to liberalize research rules that are already less restrictive than the current NIH proposal. It would be an ironic outcome if even these improved guidelines left federally supported U.S. biologists (and their patients) well behind those in other countries.

In short, there is reason for the scientific community to be mildly pleased by the recent NIH rules, but unconfined joy is not in order. The political terrain is well planted with land mines—and the new guidelines, welcome though they are, fall short of perfection. The forces that have placed stem cell research in peril are powerful, and they are among a number of voices challenging science, whether the issue is research on embryos, reproductive biology, or the teaching of evolution in the schools.



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