

Legislative Myopia on Stem Cells

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The U.S. House of Representatives has voted to ban research on, and the use of, medical treatments derived from embryonic stem cells. This bill is shortsighted and has the potential to put many critical future advances in medicine beyond the reach of patients in the United States.

There are two distinct uses of embryonic stem cells. The first, for which there is no support among members of the scientific and medical communities, is the use of stem cells to create a genetically identical person. There is a *de facto* worldwide ban on such activities, and this ban is appropriate. The second use is to develop genetically compatible biomaterials for the replacement of diseased tissues in patients with devastating medical conditions, such as diabetes or Parkinson's disease. This is important work that must and will move forward.

There have been previous attempts to ban the use of novel forms of biomedical technology. For example, in the early 1980s, when the use of recombinant-DNA technology became widespread, there was concern that meddling with genes would have horrific consequences. Some warned that DNA sequences should not be manipulated for any purpose. However, rather than ban the use of recombinant-DNA technology, Congress decided to regulate it. The partnership between scientists and regulators led to the development of new treatments for anemia, diabetes, hemophilia, and many other conditions. Moreover, our ability to sequence the human genome stems in large part from the use of recombinant-DNA technology. If the naysayers had prevailed and the technology had been banned in the United States, the scientific progress that led to these discoveries would have been made elsewhere

in the world, and patients in the United States would now be receiving second-class medical care.

Although the science of creating genetically compatible tissues with the use of somatic-cell nuclear transfer is in its infancy, as a community of scholars, we know that this approach to treatment is now possible. Since the precedent has been set, there is no question but that somatic-cell nuclear transfer will be used to develop treatments for conditions that are currently incurable. When such treatments have been perfected, patients with these conditions will be offered the prospect of cure. I believe that such research must continue in the United States if we are to provide the best possible care for our patients. The editors of the *Journal* will do our part by seeking out highly meritorious manuscripts that describe research using embryonic stem cells. When treatments derived from this technology emerge, we will publish the papers that describe them. As a physician who has cared for patients who suffered and died from conditions that we are currently unable to treat, I hope that this research can progress rapidly.

It is reasonable to regulate the technology of somatic-cell nuclear transfer, just as we regulate the use of radioisotopes and recombinant DNA, but it is unreasonable to prohibit research using this technology. No matter what Congress decides, such treatments will be developed somewhere in the world. Physicians and scientists in the United States should be at the center of the action, not on the sidelines. We want to be sure that legislative myopia does not blur scientific insight.

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