MIDLANDS VOICES

Limitations on stem-cell research could hurt Nebraskans

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Pressure is mounting on the University of Nebraska Board of Regents to limit the use of human embryonic stem cells (hESC) to only the cell lines originally approved by former President George W. Bush. Such a ruling would be ill-advised and detrimental to Nebraskans.

First, and foremost, researchers who have decided to work with hESC have not made this decision lightly. The needs of those who are seriously ill compel stem-cell researchers to find effective treatments for serious diseases that affect both patients and their loved ones.

There is indeed a choice to be made. There are many thousands of embryos that will eventually be discarded.

A small number of these embryos can be donated for conversion into cell lines that can provide essential new knowledge to aid in the discovery of treatments for diseases that destroy life prematurely. It is ethically compelling to conduct research on hESC derived from these embryos.

Second, there are some who argue that there is no longer a need to work with hESC, because human-induced pluripotent stem (iPS) cells are the way to go.

It is far too early to declare victory, however. Recent evidence suggests that human iPS cells may possess genetic defects that pose medical risks. Ethically, these risks must be assessed carefully.

It is also claimed that nonembryonic stem cells already provide approved treatments for many diseases, including diabetes and heart disease. This is a gross misrepresentation of medical facts. Approved stemcell therapies for diseases, such as diabetes and heart disease, do not exist. It is misleading to suggest that ongoing clinical trials, which are experimental, will soon lead to approved miracle cures.

Third, the Bush-approved hESC lines, which were produced before August 2001, have undergone genetic modifications in the course of working with them.

Stem-cell biologists around the world recognize that newer hESC lines are needed for further study, in particular as a gold standard for understanding the properties of human iPS cells and for developing a better understanding of how to produce high-quality, clinically useful human iPS cells.

Fourth, the ability of the University of Nebraska to hire and retain faculty who work in the areas of stem-cell biology and regenerative medicine would be seriously undermined.

This is true both for those involved in the more basic side of stem-cell research and for faculty at the University of Nebraska who want to take the advances made in the laboratory into the clinic for the development of new and more effective therapies. Obviously, health care available to Nebraskans could be seriously affected.

Lastly, given that one cannot predict where the next major breakthrough will occur, researchers need to study, in depth, human adult stem cells, human iPS cells and hESC. If progress is to be made effectively and rapidly, it is important for research to continue on all three fronts.

Compassion for those in medical need, of whom there are many, requires that every viable and ethical approach available to researchers should be pursued.

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