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## **Midlands Voices: Vital embryonic research upholds university mission**

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An objective review of the evidence for the scientific importance and ethical and moral grounding of human embryonic stem-cell research (hESCR) shows that it is in the best interest of the University of Nebraska to maintain its current policy, which allows hESCR at the university in accordance with state and federal regulations.

There is no legitimate scientific debate regarding the continued importance of human embryonic stem cells to the fields of stem-cell biology, regenerative medicine, drug screening and lab study of human models of disease. All scientific bodies expressing a view hold that hESCs are integral to advancing our search for cures and treatments.

It makes no sense to say that one supports stem-cell research, but only with adult stem cells. Indeed, referring to hESCR as a separate field obscures rather than reveals the role that hESCs play in research.

Study of embryonic stem cells increases our understanding of stem-cell characteristics and differentiation to help identify existing adult stem cells, as was the case with blood-forming stem cells now used in transplants to treat a variety of diseases.

Researchers may use hESCs to create a model of Alzheimer's-afflicted brain cells for study in the lab to identify underlying disease mechanisms or to test drugs. They are used as controls in experiments that seek to show that the newly discovered induced pluripotent stem cells are functionally identical to hESCs.

In fact, the only way we will ever know if we no longer need to use hESCs in medical research is to continue to study them in comparison with other cells.

Alleviation of human suffering drives hESC use in research. Opponents have no exclusive claim to the moral or ethical high ground, as the evidence demonstrates conclusively.

For decades, government, scientific, religious and other institutions around the world have rigorously examined the ethics and approved the research use of excess in vitro fertilization (IVF) embryos that otherwise would be discarded. Research with hESCs has been ongoing in many countries, including Germany and Israel, for more than 10 years under strict regulation.

That regulation includes stringent guidelines for the donation of embryos for research purposes to ensure that no coercion or financial benefit is involved. Before grant applications are submitted, the proposal's science and ethics must be reviewed and approved by local scientific and community boards at the submitting research institutions.

Our society's acceptance of in vitro fertilization also evidences a view of the moral acceptability of embryo use. An analysis of data from the Centers for Disease Control indicates that more than two of every three embryos transferred to the uterus in IVF clinics are destined for destruction. In 2007, that equated to approximately 200,000 embryos destroyed in intrauterine transfers in the 430 IVF clinics reporting to the CDC.

The most relevant evidence for Nebraska came last year when the Nebraska Legislature adopted Legislative Bill 606 48-0 after a decade of public debate. LB 606 established the state's public policy on hESCR.

As the bill's chief negotiator described it in a recent letter, LB 606 allows continued research on federally approved embryonic stem-cell lines but prohibits the use of state funds or state facilities to destroy human embryos for the purposes of research or to create one via somatic cell nuclear transfer.

All parties involved understood that a new administration would expand federal funding to lines created after Aug. 9, 2001, and agreed that would not be cause to revisit the state's hESCR policy.

The senator's further statement that LB 606 resulted from negotiations between the medical research community and the religious community, who expressed faith-based objections to the destruction of embryos, is particularly noteworthy. That same community is seeking to change our public university's policy for the same reasons.

Nebraska law states the object of the University of Nebraska is "to afford to the inhabitants of this state the means of acquiring a thorough knowledge of the various branches of literature, science and arts."

Board of Regents action to effectively ban hESC use at the university would frustrate this object, damage the university's standing as a research university, restrict opportunity for students and faculty, and delay access to innovative treatments for the people of Nebraska.

As NU President J.B. Milliken has done, each regent should provide the citizens of the state a detailed and thorough explanation of his position before he votes on this issue.