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All stem cell research must go on

BY ROBERT P. KELCH, M.D.

Recent discoveries that skin cells can become stem cells when manipulated genetically have led some to say that embryonic stem cell research is no longer needed. This "either-or" thinking is misguided and premature. If it prevails, we may end up shortchanging millions of Americans who suffer with debilitating diseases and need scientists to develop therapies as soon as possible.

Embryonic stem cell research should proceed, and Michigan's current restrictive laws should be removed, because these patients deserve the best effort that medical researchers here in Michigan and worldwide can offer. That means allowing science to push forward the way science does best -- creatively, pursuing many paths, able to evaluate new and sometimes unexpected results.

The discoveries announced in November by laboratories in Wisconsin and Japan that human adult skin cells can be reprogrammed to behave like embryonic stem cells do indeed offer an exciting additional avenue. Embryonic stem cells derived from embryos, and now these "induced pluripotent stem cells," have potential to revolutionize treatment for diabetes, cancer, neurodegenerative diseases such as Parkinson's and possibly many other debilitating conditions.

But several problems need to be overcome before the induced pluripotent stem cells become useful for new disease treatments. Scientists need to show that the cells are stable over time. They need to learn whether the new type of stem cell really possesses the powerful traits of embryonic stem cells, which can become any type of cell in the body. Scientists also need to find different ways to reprogram the human skin cells to become stem cells. The Wisconsin and Japanese research teams used retroviruses to introduce key regulatory genes, a method that could not be used in patients because it carries possible cancer and other risks.

At this early stage in stem cell exploration, it makes no sense to abandon any avenue of research, especially if that would delay the life-changing therapies for which people are waiting.

In fact, it's time for Michigan to rescind laws that severely restrict embryonic stem cell research. Three bills in the state Legislature would allow scientists to use embryos from in-vitro fertilization clinics that would otherwise be discarded. These bills deserve support.

Changing Michigan's laws will make it possible for the University of Michigan and other state research centers to recruit top scientists and move forward in all stem cell areas. That is crucial if our state wants a share of the jobs and other financial benefits that come with a major scientific revolution in our time.

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