

October 28, 2007

## Embryonic stem cells could be ballot issue

TED ROELOFS

GRAND RAPIDS -- In fertility clinics nationwide, an estimated 500,000 embryos lie in liquid nitrogen limbo and beg a difficult question: Should these tiny cell clumps be used to research cures for everything from cancer to multiple sclerosis to Parkinson's disease? Or does that amount to destruction of human life?

But, in a state ravaged by high-wage job losses, that dilemma may be trumped by another looming question: Can Michigan afford to turn its back on the economics of embryonic stem cell research?

It is an issue voters could be asked to settle on the November 2008 ballot in what could be an epic showdown of money versus morality.

Grand Rapids physician Paul Farr thinks Michigan is missing more than science because of its severe restrictions on the research. He likes to imagine Grand Rapids' keystone research facility, the Van Andel Institute, could lead the way to a new economy.

"This could prove a wonderful economic opportunity," said Farr, past president of the Michigan State Medical Society.

"When you couple (the promise of embryonic stem cell research) with a research facility like the Van Andel Institute, that really is on the leading edge in so many areas, it could really make a difference."

States from California to Connecticut to New Jersey have jumped aboard the fledgling science of embryonic stem cell research, pouring hundreds of millions of dollars into the effort.

Michigan goes beyond not funding such research. It stands with five other states -- including Bible Belt strongholds Louisiana, Arkansas and North and South Dakota -- in severely curtailing it.

And, thus far, Grand Rapids' signature medical research facility, the Van Andel Institute, is not interested.

"From our standpoint, we don't do it. We have not had a request from our staff to do it," said institute chairman David Van Andel.

With an annual budget of \$23 million and 180 researchers, the institute is the dominant research player in West Michigan. It plans to triple its research staff by 2009.

"Unless science dramatically changes to point us in a different direction, I don't see us engaging in it," Van Andel said.

But he did leave the door open.

"You never say never," Van Andel added.

### Hostile research climate

A group that supports lifting the restrictions isn't prepared to wait that long.

Frustrated by the failure of the Legislature to deal with the issue, Michigan Citizens for Stem Cell Research & Cures has filed paperwork with the state to put it on next year's ballot. It expects to decide by the end of the year whether it will.

Earlier this month, Bloomfield Hills shopping mall magnate A. Alfred Taubman threw his support behind the effort with a \$1.4 million donation to the organization. He also promised to donate to the campaign if the issue goes to the ballot.

Taubman also has donated \$7 million to Eva Feldman, a noted University of Michigan researcher of Lou Gehrig's disease. Because of Michigan's laws, Feldman had to join a research project in California.

Another U-M researcher fears the state is losing this research race.

"The law in Michigan puts us at such a disadvantage in embryonic stem cell research that people in that area don't even apply for jobs here," said Sean Morrison, director of the U-M Center for Stem Cell Biology.

The center is one of only three embryonic stem cell research centers funded by the National Institutes of Health in the United States.

"While there are other states that are literally investing billions in this, we are literally threatening to put people in jail for this," Morrison said.

Under Michigan law that dates back to 1978, scientists are banned from any research that would destroy human embryos. State law passed in 1998 makes it a crime--with a penalty of up to \$10 million and 10 years in prison--to perform therapeutic cloning, the transplant of DNA from an individual into an embryo to grow tissue or organs. Michigan researchers are effectively limited to existing embryonic cell lines imported from other states.

Morrison believes the research climate sends a chilling message to prospective bio-tech companies: Michigan is not a good place to set up shop.

Morrison is one of the founders of OncoMed Pharmaceuticals Inc., a medical research firm founded in 2004 that is focused on the role of stem cells in allowing cancer to spread. Its original home was Michigan.

"The first thing the investors wanted to do was move it to California," Morrison said. OncoMed is now based in a San Francisco suburb and has reported more than \$50 million in venture capital.

Cancer researcher Michael Clarke left his job at U-M in 2005 to take a position at the Stanford Cancer Center, joining a tide of researchers drawn to California by the passage of Proposition 71. Clarke oversaw laboratory studies that were the first to isolate stem cells from breast tumors.

Earlier this month, Clarke said on a national public television report about the exodus of researchers to California: "I think Stanford in particular, and California in general, is a much richer environment for doing science."

### **University reputation at risk**

U-M President Mary Sue Coleman said the university risks losing its prestige as a preeminent research facility if the law is not changed.

"It will become ever more difficult to keep some of the best people in the field," said Coleman, whose perspective is shaped by her doctorate in biochemistry.

"As a scientist, I believe embryonic stem cell research is one of the promising research fields of our time. I do believe it is going to be the science of the 21st century."

### **Ethical questions**

Indeed, the high-stakes interstate competition in this field only intensified with the decision by President Bush in 2001 to limit federal funding to a few dozen lines of embryonic stem cells already in existence. Many of the lines proved to be contaminated. Bush's decision hardly settled the matter. Debate has deepened as public policy struggled to keep pace with a science that some think is tampering with the province of God.

In 1998, researchers isolated human embryonic stem cells grown from embryos created in the laboratory by couples seeking to get pregnant through in vitro fertilization.

Because stem cells can be teased to become virtually any kind of cell, many deemed it a watershed research breakthrough. Critics saw a slippery ethical slope.

With more than 400 fertility clinics nationwide generating thousands of extra embryos a year, there are now a half-million surplus. Some are discarded. A small number are "adopted" by couples who have the embryos implanted in a prospective mother's womb with hopes of producing a baby. Most lie in storage at 320 degrees below zero, with little prospect they will ever be used.

### **Is this life?**

"Every time stem cells are removed from a human embryo, a unique human life is killed," said Pam Sherstad, spokeswoman for Right to Life of Michigan.

Pushing back against both the ethics and economics of this research, Sherstad and other critics say its potential has been exaggerated. They note treatments based on adult stem cells have a proven track record that includes therapies for lymphoma and leukemia.

Proponents concede it has yet to be linked with any proven human treatment, while noting the research is in relative infancy.

"Right to Life of Michigan is very supportive of the other types of research that do not require the killing of a human being," Sherstad said.

Earlier this month, more than 500,000 Catholic households statewide, including about 55,000 in West Michigan, were mailed packets from the Michigan Catholic Conference signed by the state's seven bishops.

A 12-minute DVD and brochure outlined the church's opposition to embryonic stem-cell research and its support of using adult stem cells instead.

Bishop Walter Hurley of the Grand Rapids Catholic Diocese said the issue goes to "the very core of who we are as God's people."

"Life comes to us as a gift from God," said the leader of West Michigan's 175,000 Catholics. "We need to treasure it and watch over it in all its forms, from the very beginning to the grave."

In what sounds like a political warning shot, the Michigan Catholic Conference released a poll Wednesday showing 80 percent of state Catholics are opposed to stem cell research that "kills the human embryo."

### **Expensive initiative**

The church's rhetoric is a graphic reminder any ballot issue here would likely stir the same passions that marked the 2006 ballot proposal in Missouri.

After a bitter campaign notable for Rush Limbaugh's taunting mimicry of research advocate Michael J. Fox and his Parkinson's symptoms, Missouri voters narrowly lifted that state's restrictions.

Missouri proponents of embryonic stem cell research spent \$30 million on the campaign, the bulk from the billionaire founders of a biomedical research firm.

Opposition was led by the Missouri Catholic Conference and Missouri Right to Life.

It is thought a similar campaign would need at least \$15 million to have a chance in Michigan.

Caledonia resident Cathy Coury has been fighting for embryonic stem research for years. But for her, it's about more than economics.

Coury has two children with juvenile diabetes, Nicholas, 9, and Gabriel, 13. In 2002, she went before Congress to ask for expanded federal funding for disease.

She now believes embryonic stem cell research might offer a cure.

"For me, it hits home pretty strongly," Coury said.