

Stem-cell veto called setback for Michigan

BY PATRICIA ANSTETT

FREE PRESS MEDICAL WRITER

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President George W. Bush's veto Wednesday of embryonic stem-cell legislation is a big setback for Michigan, one of a handful of states with the most restrictive laws in the country, patients and researchers said.

"My philosophy is, I live for today and hope for tomorrow, and today, my hope for tomorrow has been dashed," said Danny Heumann, a spinal cord patient from Ann Arbor who works with a statewide campaign pushing for changes in Michigan law.

Researchers in Michigan can use only embryos derived from fertility procedures in other states.

But like the emotional debate in Washington, D.C., not everyone agrees.

Right to Life of Michigan, which supports the Bush veto, said researchers could concentrate on treatments using adult stem cells -- those obtained from the umbilical cords of newborns or donors for cancer patients.

Legislation vetoed by Bush would have allowed federally funded researchers access to a larger pool of embryonic stem cells obtained from fertility procedures. Later Wednesday, the House failed to override the veto.

Pamela Sherstad, director of Right to Life of Michigan, said the veto allows researchers to concentrate on more proven treatments. Taxpayers should not have to fund more experimental stem-cell therapies, she said.

The vetoed legislation "only deals with taxpayer funding, our tax dollars used. It doesn't prohibit" private funded work with embryonic stem cells, she said.

The debate ignited Wednesday gives the public a science lesson about the two basic types of stem cells.

In the United States, most treatments with adult stem cells have been used to treat leukemia. The federal Food and Drug Administration has not approved the use of adult stem cells for most other diseases and conditions, saying it needs more



At the University of Michigan, Sean Morrison, right, talks with Jack Mosher while he works on a procedure to culture stem cells. (2005 photo by MANDI WRIGHT/Detroit Free Press)

Stem cells are body's building blocks

QUESTION: What are stem cells?

ANSWER: They are a

published studies to show the treatments are safe and effective. The vetoed legislation does not deal with adult stem cells.

Embryonic stem cells are derived from in vitro fertilization procedures. Each year, thousands are discarded as medical waste, once couples consent. Small numbers are donated to infertile couples.

In announcing the first veto of his presidency, Bush surrounded himself with 18 couples whose children were born from leftover embryos.

"This bill would support the taking of innocent human life in the hope of finding medical benefits for others," Bush said.

Two Michigan researchers said Bush missed the point.

"Because of the unique properties of embryonic stem cells, we just can't expect the same range of benefits from using adult stem cells," said Dr. Ed Nieshoff, a spinal cord injury research scientist at the Michigan Rehabilitation Institute in Detroit. He called the veto "a tremendous setback not only for Michigan but the nation."

The institute has been trying for more than a year to obtain FDA approval for a study using adult stem cells in people with spinal cord injuries.

"I have hundreds of patients who are anxious to pursue treatment in a U.S. academic center and thereby avoid extensive travel for questionable treatments offered elsewhere in the world," said Nieshoff, who has a spinal cord injury from a diving accident.

Patients pay as much as \$50,000 for medical care alone for procedures abroad. Some of these procedures are barely studied; some are in more accepted stages of research.

Dr. Sean Morrison, director of the University of Michigan's Center for Stem Cell Biology, said embryos derived from in vitro procedures are "microscopically small balls of cells whose centers are taken out and allowed to grow in dishes."

Under current law, only embryonic cells derived from IVF procedures before Aug. 9, 2001, can be used in federally funded research. Those cells were contaminated because they were preserved with animal products and cannot be used for human studies, he and others said.

Finding private money is difficult, particularly given Michigan's reputation for restrictive stem-cells laws, Morrison said.

Michigan's law also makes it more difficult to compete with other universities for embryonic stem-cell researchers, said Liz Barry, managing director of U-M's Life Sciences Institute. U-M has no trouble recruiting researchers for adult stem-cell studies, she said.

foundation or building block of all tissue in the body.

As such, they hold the promise of being the body's essential repair tool.

The trick is figuring out how to grow them in a controlled way and to make them take on the exact job needed. The hope is that someday they could treat dozens of diseases and injuries.

Q: Are there different kinds of stem cells?

A: Yes. There are two main types: embryonic stem cells, derived from in vitro fertilization procedures, and adult stem cells, which either come from a baby's umbilical cord or from a person's own body.

Bills to change Michigan law have languished in the House and face tough opposition in the Senate, where a companion bill with bipartisan support was introduced earlier this year.

Contact **PATRICIA ANSTETT**

at 313-222-5021 or anstett@freepress.com.

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Q: Is one better than another?

A: That's the debate. Proponents say embryonic stem cells are more adaptable and useful, because they are early cells uncommitted to a particular task.

Opponents say doctors know much more about adult stem cells and should use federal funds for what's best known.

Q: What federal laws govern the use of adult stem cells?

A: There are no legal barriers to the use of adult stem cells, which have been used for about 10 years in the treatment of some

cancers, including certain types of leukemia.

Still, use of those cells for other conditions lags in the United States, and some patients have gone abroad for adult stem-cell therapies for spinal cord injuries and other conditions. For example, no hospitals in the United States use adult stem cells for spinal cord injury, but at least a half dozen other countries do.

The federal Food and Drug Administration considers use of adult stem cells part of its domain and awaits published studies with results before giving the go-ahead to other uses.

Q:What about embryonic stem cells?

A: The federal government allows the use of embryonic stem cells in federally funded research only if they were obtained from in vitro fertilization procedures performed before Aug. 9, 2001.

Q: Are there other ways to obtain embryonic stem cells?

A: Yes. Researchers can obtain cells from private sources, but they are costly. Some states, including Michigan, ban the use of embryos from IVF procedures performed inside that state.

Q: What would pending legislation in Michigan do?

A: It would let Michigan

couples who no longer wanted embryos from IVF procedures donate them for scientific purposes.

Q: Do other states restrict their use?

A: Most do not. As a result, Michigan has the reputation among most scientists as one of the most restrictive states. Other states, notably California, have approved millions to further research and treatments with stem cells.

www.marlow.org.cq

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at 313-222-5021 or anstett@freepress.com.

Where Michigan's gubernatorial candidates stand

Michigan law prohibits research involving human embryos that results in the destruction of the embryo.

Gov. Jennifer Granholm, a Democrat, supports pending legislation to lift the ban, but it is unlikely to reach her desk because a majority of legislators oppose it.

Granholm sent a letter to President George W. Bush this week asking him to approve the measure he vetoed Wednesday.

Dick DeVos, a Republican, does not support legislation that would authorize the destruction of embryos but supports other forms of stem-cell research.

He has not taken a position on the federal legislation.

Dawson Bell

In Michigan

Bills are pending in the Michigan House and Senate to allow expanded stem-cell research.

Intent of the bills

- 1.) Permit research using Michigan embryonic stem cells, which is prohibited under a 1978 law.
- 2.) Permit somatic cell nuclear transfer. This involves transplanting the nucleus of an adult stem cell to an unfertilized human egg, which causes the egg to divide multiple times and produce new cells with the adult patient's genetic code. This is illegal under a 1998

state law that banned all forms of cloning.

3.) Increase penalties for human cloning to a 15-year felony and \$10 million fine.

Sponsors and status

The main sponsor of the House bills is Rep. Andy Meisner, D-Ferndale. The bills have had one hearing in the House Health Policy Committee, chaired by Rep. Ed Gaffney, R-Grosse Pointe Farms.

The main sponsor of a Senate bill identical to one in the House allowing stem-cell research is Sen. Gretchen Whitmer, D-East Lansing. Sen. Shirley Johnson, R-Troy, is the main sponsor of the Senate human cloning bills.

A cosponsor of the

Senate bills is Sen. Beverly Hammerstrom, R-Temperance, who chairs the Senate Health Policy Committee, which will hold hearings on the bills.

By Chris Christoff, Free Press staff writer