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University researchers confident about new stem cell environment

BY: STEPHANIE STEINBERG

Last year, a woman came to the University Medical School looking to donate her in vitro fertilization embryos.

She had recently lost the ability to walk because of an inherited spinal cord abnormality and hoped the University's stem cell discoveries could one day help her regain the use of her legs.

But that was before the passage of Proposal 2 in November. And because of restrictions in the state of Michigan, the researchers were forced to turn her away.

Now they don't have to.

A little more than three months after the passage of Proposal 2, University stem cell researchers say the formation of a new research consortium paired with a more research-friendly advocate in the White House creates a bright future for the field in a state that is far behind many others.

Before the proposal's passage, Eva Feldman, director of both the A. Alfred Taubman Medical Research Institute and the Program for Neurology Research & Discovery, was forced to perform her research in California — a state with looser stem cell restrictions.

In California, Feldman has been transplanting embryonic stem cells into the spinal cords of rats that carry the gene for Amyotrophic Lateral Sclerosis, or Lou Gehrig's disease. The goal of her research is to determine whether stem cell transplantation can be used as a potential therapy to treat people with ALS.

Because her research uses embryonic stem cells, her work was illegal in Michigan before the Nov. 4 election.

For the past couple months, Feldman said she has been transferring equipment from her laboratory in California to the University of Michigan, and that it's "really exciting for us that we can now do what we want to do in Michigan."

Stem cell researchers at the University are in the process of forming The Consortium for Stem Cell Therapy, a facility that will provide researchers the space to derive new embryonic stem cell lines.

Gary Smith, director of the Reproductive Sciences Program, and Sue O'Shea, director of the Center for Human Embryonic Stem Cell Research, will both head the consortium when it officially opens in late spring.

O'Shea said one of the consortium's goals is to create disease-specific stem cell lines, which will help Michigan catch up to the stem cell developments in other states.

"You have to admit that Michigan is behind, and so in order for us to compete at all, we're looking for a hook that would (make a) difference or something unique, and we're going to try to do that using disease models," O'Shea said.

The researchers will obtain donated stem cell lines containing genetic diseases from fertility clinics.

These lines can be used to study many diseases including Huntington's disease and Lou Gehrig's disease.

However, to make new stem cell lines and establish the consortium, researchers are relying on donations from private entities.

"Funds are needed to make new human embryonic stem cell lines, but that does not mean public funds," Smith said. "Our goals are to initiate work under Prop. 2 with funds provided by philanthropists or donors."

O'Shea said the researchers are also anticipating friendly decisions from President Barack Obama concerning federal stem cell funding.

"We're still working with the directive that even though we can derive stem cell lines, we can't do it with (National Institutes of Health) money," O'Shea said. "Until that changes, and I expect it will, we're still bound by the previous presidential directive of President Bush."

University stem cell researchers are also eagerly waiting Obama's removal of the presidential ban that currently exists on stem cell work that was put in place by President Bush.

Officials at the consortium are also working to inform the public about how they can donate their embryos.

Smith said he often receives phone calls from people in and outside Michigan, asking where they can donate their embryos.

"We look at this as an opportunity to be able to inform the public and medical health professionals as to where and how they can donate their embryos to embryonic stem cell research," he said.

Feldman said that as things start to come together for stem cell research in Michigan, medical advancements can't be far away.

“Between the passage of Proposal 2 and the lifting of the previous presidential restrictions of stem cell research, I know we’ll really be able to accomplish a great deal of very meaningful stem cell-based medical research in Michigan,” she said.