

Note from MCSCRC: Please note Proposal 2 was not a ballot measure “approving stem cell research” as the article indicates. Proposal 2 amended the Michigan State’s Constitution to allow a broader range and a more modern way of conducting embryonic stem cell research. Go to: <http://www.stemcellresearchformichigan.com/amendment.php> to read Proposal 2 in its entirety, as it was voted for by Michigan citizens and adopted into the state’s constitution.



U-M's stem cell study on ALS looks promising

Researchers hope to find spinal injections slow disease

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Researchers at the University of Michigan are seeing positive results from the earliest stages of experiments designed to determine whether stem cells can help patients with amyotrophic lateral sclerosis (ALS) -- better known as Lou Gehrig's disease.

Five ALS patients who have had stem cells injected into their spines have shown no signs of rejecting them.

It's a project that is being closely monitored by people all over the country, including Macomb Township's Clarence Alexander.

The 65-year-old spent years at meat-packaging companies working jobs that called for physical labor. But now, the body that helped put food on his table has betrayed him. Two and a half years ago, while recuperating from back surgery, Alexander started to fall more and more often.

Doctors eventually diagnosed him with ALS, which affects brain control of the muscles. Yet he feels lucky.

"My disease isn't as aggressive as what some have," Alexander said. "For some people, it just kills them right away."

Like many with ALS, Alexander has high hopes for the stem cell work under way at the University of Michigan. Researchers are in the first stage of a study that will eventually determine if fetal stem cells can have an effect on ALS patients. So far, the results have been what the scientists had hoped for.

Since January, a joint team of researchers from the University of Michigan and Emory University in Atlanta has injected stem cells into the spines of five patients with ALS. The initial goal is to see if introducing those cells will cause the patients any problems.

"So far, there have been no problems with sensation," said Dr. Eva Feldman, director of the A. Alfred Taubman Medical Research Institute on the University of Michigan campus, where the project was conceived. "There have been no untoward side effects."

The first three patients received five injections into one side of the lumbar region of the spine, with each dose carrying 50,000 stem cells. The next two, as well as a third patient who will be injected this month, received five shots on each side of the spine.

The surgical injection of the stem cells and clinical follow-up work is being conducted at Emory by Dr. Nicholas Boulis, who had worked with the Michigan team before moving to Atlanta. The research on the stem cells is being conducted in Ann Arbor.

A few years ago, this kind of work would not have been possible in Michigan. But two years ago, state voters approved a ballot measure allowing stem cell research. In the next year and a half, 18 people will be injected to further ensure the host bodies can safely accept stem cells.

At any time, 30,000 U.S. residents live with ALS. Most of those are between ages 40 and 75, across racial and gender divisions.

The disease attacks the motor neurons that carry the brain's impulses to the muscles. While the brain remains fully functional, the muscles deteriorate to the point where the body can no longer move or even breathe on its own.

Alexander has seen the effects firsthand.

"I can't walk," he said. "I can get out of my chair and stand for a bit -- about a minute or so. But I can't go to the bathroom by myself. Everything I do now, I have to have assistance."

Should phase one prove successful, a second test group will be brought in to determine what effect stem cells will have on the progression of ALS in patients.

Sue Burstein-Kahn, executive director of ALS of Michigan, a nonprofit group that supports research on the disease, said: "We are very excited about Eva Feldman's work and the potential for stem cells."

Positive results in the research could lead to a larger test group and, in a perfect world, widespread treatment that might delay or stop the spread of the disease.

It's a process that will take years to play out, even under the best circumstances. The test subjects realize any benefits derived from the research may come too late to help them. That's one reason Feldman holds them in such high esteem.

"We have the privilege of working with people in (the ALS) community," she said. "They are an amazing group. They have a debilitating and very difficult illness, but they've universally stepped forward to volunteer and become involved in the research. It may not help them, but they know it might help others in the future. And that inspires us."

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