❖THE DERBY CITY NSCIA NEWSLETTER❖

FEBRUARY 2006

The Derby City Chapter of the National Spinal Cord Injury Association Network- Serving Kentuckiana.

Message From the President

Dear Members & Friends-

An article in last month's issue titled, "Free Lasik for Quads" generated questions about contact info. The telephone number is 312-338-1234. The website address is www.kraffeye.com .

As of this writing no speaker is scheduled, but we hope to have one. A video will be shown in lieu of a speaker if none is scheduled.. Pizza and soft drinks will be provided.

March's meeting will be held at 6:30 at Frazier Rehab, 4th floor dining hall.

-David Allgood

CENTER FOR ACCESSIBLE LIVING'S PROJECTS WITH INDUSTRY (PWI) PROGRAM

- ◊ Assists persons with disabilities in the job search process, including resume development, interviewing skills, job seeking skills training, job leads, professional clothing for low income participants, & independent living skills related to finding & keeping employment.
- ◊ Trains and educates consumers and businesses on ADA issues regarding employment.
- ◊ Works with businesses to develop jobs for persons with disabilities.
- ◊ Assists in job retention when necessary.
- ◊ Provides accommodation in the job search process as needed.
- ◊ Other employment-related services per individual needs.

For more information contact Barbara Robbins at 589-6620 or www.calky.org/employment.html

From the Courier-Journal, December 13, 2005 –ed

UofL ACHIEVES 'AMAZING' FIND WITH STEM CELLS

By Laura Ungar

University of Louisville researchers have coaxed stem cells from adult mice to change into brain, nerve, heart and pancreatic cells—a discovery that could lead to treatments for a host of human diseases and possibly end the national debate over the use of embryonic stem cells.

"We have found a counterpart for the embryonic stem cells in adult bone marrow. This could negate the ethical concerns," said Dr. Mariusz Ratajczak, leader of the research team and director of the stem cell biology program at Uof L's James Graham Brown Cancer Center.

The next step is to replicate the experiment with similar cells identified in adult humans.

"It's huge," says Ryan Reca, one of the researchers. "It's an amazing discovery."

Others agreed, although they, like Ratajczak, cautioned that it's early in the research process and that more study is needed.

If the cells from adult humans are found to act like those in mice, and other scientists can duplicate the process on a larger scale, the discovery goes from "very important" to "incredibly important," says Dr. Stephen Emerson, chief of hematology/oncology at the University of Pennsylvania, where Ratajczak used to work.

It could lead to expanded research and "be transforming," he said.

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Derby City Area Chapter
of the
National Spinal Cord Injury Association

ABOUT THE ORGANIZATION

The Derby City Area Chapter of the N.S.C.I.A. is a membership organization for individuals with spinal cord injuries, their families, and health professionals. Founded in 1984 as a Charter Member of the N.S.C.I.A., it was incorporated under IRS Section 501 (c) 3 as a not for profit organization. The Board of Directors consists of the Officers, Past President and the Board Members At Large.

***

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NSCIA DERBY CITY CHAPTER NEWSLETTER

Editor- Barbara Davis
Contributor- David Allgood

Visit Our Website at www.DerbyCitySpinalCord.org

UofL'S DISCOVERY (Cont'd)

"This is a very important first step," said Scott Whittmore, scientific director of UofL's Kentucky Spinal Cord Injury Research Center.

However, Whittemore said that "there are some major issues that need to be resolved before you can think about" translating Ratajczak's research into medical treatments.

Ratajczak announced some of his findings yesterday at the annual meeting of the American Society of Hematology in Atlanta. His team also plans to present a paper today showing that the type of cells it has identified—called "very small embryonic-like" or VSEL—mobilize into the bloodstream to help repair damaged tissue after a stroke in mice.

Although treatments based on the team's discovery are most likely years off, the research could hold promise for such conditions as heart disease, stroke, diabetes and Parkinson's disease. Using a patient's own VSELs could eliminate the danger of rejection that could exist with donor stem cells.

Some local residents with diseases that could be treated based on the discovery are optimistic.

More immediately, the discovery could boost disease research, said Gayle Zoeller, a 61-year-old Louisville resident with Parkinson's disease.

"I guess we would get a lot more funding," said Zoeller, who has worked with the nonprofit fundraising group Parkinson Alliance. "You wouldn't have to fight Congress."

And the possibility of more research gives her hope.

"The more study that's going on," she said, "eventually something's going to work."

Doctors and researchers have been extremely interested in stem cells because they have the potential to develop into many types of cells in the body.

Embryonic stem cells are able to give rise to any type of cell except those needed to develop a fetus, according to the National Institutes of Health.

Although the potential for adult stem cells has been thought to be more limited, the use of embryonic stem cells has been controversial because it involves the destruction of embryos, which opponents say amounts to destroying human life.

"Specifically, embryonic stem cells are derived from embryos that develop from eggs that have been fertilized in vitro—in an in vitro fertilization clinic—and then donated for research purposes with the informed consent of the donors," according to a stem cell primer from the National Institutes of Health.

In 2001, President Bush restricted federal funding of research to existing lines of cells developed from embryos.

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Refrigerator Calendar
*2006

FEBRUARY

6th - Elderly & Disabled Advisory Council Meeting
Mon 1:00-2:30 p.m.; TARC; 1000 W. Broadway; Board Room.

20th - Derby City Chapter Meeting, 4th floor activity room; 6:30 p.m.
Mon Frazier Rehabilitation; Abraham Flexnor Way

18th - Metro disAbility Coalition Meeting; 1 p.m. – 3 p.m.; PVA Office on Goss Avenue.
Sat Speaker to be announced; if questions, contact Terri Leasor at 589-6620 or at mdclouky.org

MARCH

6th - Elderly & Disabled Advisory Council Meeting
Mon 1:00-2:30 p.m.; TARC; 1000 W. Broadway; Board Room.

20th - Derby City Chapter Meeting, 4th floor activity room*; 6:30 p.m.
Mon Frazier Rehabilitation; Abraham Flexnor Way.
***An eventual move could cause the meeting location to change from the activity room to elsewhere. Please pay attention to upcoming issues for announcement of this change.**

18th - Metro disAbility Coalition Meeting; 1 p.m. – 3 p.m.; PVA Office on Goss Avenue.
Sat Speaker to be announced; if questions contact Terri Leasor at 589-6620 or mdclouky.org

For More Information Call
David Allgood at 502-589-6620

Friends for Michael Spinal, Inc. Cord Injury
Condensed 2006 Schedule

Feb 24– 26—Carl Casper Car Show; KY Fair & Expo Ctr; FFM has a booth with Bremm Vinyl Graphics in the East Wing. We will be raffling a $1,500 scooter donated by SS Powersports and other items. ARCA driver Frank Kimmel will be available for autographs and pictures during the show, Call 532-7071 for details.
Upcoming events will be published in the next edition of the newsletter.

STEM CELL DISCOVERY, CONT'D

But many researchers and groups have persisted in urging such funding, saying embryonic stem cells hold the best potential for medical research. They also say some of the older stem cell lines funded under Bush's policy have been contaminated and are not as useful as producing new ones would be.

Ratajczak's recent discovery show that the newly identified adult stem cells appear to act like embryonic stem cells. He first described a strategy for identifying and isolating them in a 2004 issue of the journal Leukemia. But that earlier research also showed that VSELs are very rare and difficult to grow in a laboratory.

The research announced yesterday appears to show that VSELs can be grown in the laboratory, multiply into clusters of cells and then be coerced to change into other types of cells, such as brain or heart-muscle cells.

In experiments, the team extracted bone marrow from adult mice, put them into a cell sorter to extract the VSELs, put those cells into a petri dish, and then activated them, using a confidential process that is part of a patent application by UofL.

The cells were then exposed to chemicals generated by the mouse's body called "factors" and changed into cardiac muscle cells, pancreatic cells, nerve cells and brain cells.

"We've established how to isolate and how to unleash the power of this cell," said Ratajczak, who has worked at UofL since 2001.

The patent application, made last Thursday, refers to isolating the VSELs, purifying them and unleashing their power.

Dr. Donald Miller, director of the cancer center, would not say how much money went into Ratajczak's research—although he did say that the university "invested heavily" to bring Ratajczak's team to Louisville and that the group received two National Institutes of Health grants to support research in the past six months.

"This is an early observation, but we're terribly excited about it and what it means in the future," Miller said. "It certainly has potential for many types of diseases."

A spokeswoman for the National Institutes of Health and the chairman of the agency's stem cell task force would not comment on Ratajaczak's research because he has not had a chance to study it.

But others agreed the discovery could have wide-ranging implications—especially if VSELs in humans can do what VSELs in mice have been made to do.

"It would certainly be very exciting to be able to transform them, convert them into other cells.

Also from the Internet—ed

NEW HOPE FOR SPINAL CORD INJURY PATIENTS

Tiny nerves taken from the rib cage, fortified with a powerful growth inducer and transplanted in the spinal cord significantly reversed paralysis in rats with spinal cord injuries.

That's the finding of a study in the October issue of the Journal of Neurotrama. The study shows that nerve cells can be inserted and stimulated to grow in damaged areas of the spinal cord, and the discovery may lead to improved treatments for people with spinal cord injuries.

Using this method, researchers from the University of California-Irvine (UCI) and the Long Beach Veterans Administration Medical Center were able to partially restore hind leg movement in rats with severed spinal cords.

"By using tiny nerves from the rib cage as cables connecting the severed spinal cord, we were able to get some improvement in leg function," says Dr. Vernon Lin, a professor of physical medicine at UCI and director of the Spinal Cord Injury Group at the Long Beach V.A.

"Regeneration is considered very difficult because the damaged area apparently inhibits growth of new nerve cell connections. This study gets us closer to arriving at the right combination of growth factors, nerve cells and physical stimulation to overcome these inhibitions and successfully treat spinal cord injury," Lin says.

The growth inducer used in this study, a molecule called aFGF, is found in most nerve cells.

The rats with severed spinal cords that received both a FGF and the nerve grafts were able to move their hind legs after treatment. Rats that received either a FGF or nerve cell grafts alone had nearly no improvement, the study says.

HOPE OF WALKING FOLLOWS SURGERY

By Alan Bavley

Christopher Schmeider is expected home tonight from China, filled with hope that he will one day walk again.

The 18-year-old Louisburg, Kansas, man was paralyzed from the chest down last year in an accident that damaged his spinal cord.

On Thanksgiving Day, he underwent a procedure at a hospital on the western outskirts of Beijing which injected cells from aborted fetuses into his spine to

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HOPE OF WALKING, CONT'D

Promote regeneration of his spinal cord.

"It's a pretty big deal to me. It's my chance to walk," Schmeider said late last week in a telephone interview from Beijing. "My goal is to be walking in a year."

Schmeider said he already is regaining his sense of touch in his legs and feet. He also has some sensations in his legs that he finds hard to describe. "It's a tingling, burning feeling," he said. "It's not unpleasant. It's very mild."

Schmeider was injured in August 2004 while painting his father's house in Louisburg. His rented bucket lift tipped and catapulted him 45 feet. His twin brother, Garrett, found him minutes later.

Huang Hongyun, the American-trained neurosurgeon who performed the surgery, was cautious about how Schmeider would do.

"It's hard for me to predict how much Christopher can recover his body functions," Huang said. It's possible that he will be able to walk with braces after a certain period. But I can't say exactly when because the rate of recovery is different with each individual case."

Huang says he has operated on more than 300 patients from about 50 countries. He implants olfactory ensheathing glial cells, which are involved in the sense of smell. The olfactory nerve, which sends sensations of smell to the brain, continually regenerates throughout a person's life. The cells Huang uses support the regeneration by wrapping around nerve fibers and enhancing their growth.

While other scientists have been able to replicate Huang's results in animals, many have strong concerns about his work with paralyzed patients. So far, Huang hasn't produced controlled studies that compare the recovery of patients who receives his treatment with those who don't. And critics say that much of his evidence of improvement is based on anecdotes, rather than hard scientific measurements. Even so, there is now a two-year international waiting list of patients seeking Huang's treatments.

While Schmeider was at the hospital, there were American patients from a half-dozen states, as well as those from Italy, Germany, the Philippines, and Mexico. Their expectations were heartening, Schmeider said. "I saw people getting more feeling, muscle control, things like that," he said.

Schmeider was able to move to the top of the waiting list through the intervention of a David Landewee, a Kansas resident who underwent the procedure in March. Landewee suffered a spinal cord injury similar to Scmeider's in an auto wreck 10 years ago.

(Continued Underneath *For Sale* in next column)

FOR SALE!!!!

97 Mercury Sable LS; station wagon. Leather interior; 6-cylinder; 6-passenger seating; rear-facing third seat; Braun wc topper; Monarch hand controls. 93,000 miles. Price negotiable.

2001 Dodge Intrepid. 30,000 mi; leather interior; automatic transmission; Braun overhead wheelchair carrier & hand controls. **Call Ruth at 239-9754 after 5 p.m.** if interested in either car.

***2003 Ford F-250 lift-equipped green/gray van;** leather seats, TV, DVD player. Playstation hookup, am-fm radio. Rick Miller, 937-2245.

***Shower Chair;** 2 yrs old, negotiable; **2 RoHo cushions; low profile;** $150 each; **Invacare 900 Action Power Chair;** 4 yrs. Old; $600. Call 448-5296.

Cookbooks for Sale: Recipes compiled by Chapter members; $10:00. Call David @ 589-6620.

***Video tapes for sale**. Various topics related to spinal cord injuries. Call David Allgood or Buddy Lawson.

****If assistance is needed to pay for any of the above items, contact Kentucky Assistive Technology Loan Corporation at 1-800-327-5287 for information on loans at 5% interest to qualified candidates.*

SURGERY, CONT'D

Since surgery in Beijing he has maintained a rigorous regimen of exercise and physical therapy. He has regained the use of some muscles in his hips and can now walk as far as 375 feet using leg braces and a walker. When Schmeider's mother saw the article about Landewee in the paper, she contacted him. Schmeider and he became friends, and were accompanied by Schmeider to China for the surgery.

"I just think it's going to work," she said. "You have the surgery, you have the hope. It will work."

CALL 589-6620 TO PLACE A FOR SALE AD

You are cordially invited to join us!

The Derby City Chapter of the National Spinal Cord Injury Association consists of people with spinal cord injuries and similar physical conditions, their family members, friends, and professionals or other interested parties.

We meet:

WHEN- Third Monday of every month from 6:30 to 9:00 PM

WHERE- Frazier Rehab Center, 4th floor Dining Room

220 Abraham Flexner Way

If you wish to be a member, donor, and/or be on the mailing list of the Derby City Chapter of the National Spinal Cord Injury Association please complete and mail the following form to the address below

National Spinal Cord Injury Association
Derby City Chapter

Membership & Organization Sponsorship Form

Name: Mr./Mrs./Ms./Dr._____ **Date**_____
Address:_____ **Apt.#**_____
City/State/Zip: _____
Business (if any):_____
Home Phone:(__)_____ **Work Phone:(__)**_____
Date of Birth_____
Para:_____ **Quad**_____ **Hemiplegic:**_____
Level of Disability_____ **Other Disability**_____
Able-Bodied(yes/no):_____
New Member:_____ **Renewal**_____ **Newsletter Subscription (only $12):**_____
Special Interests /Hobbies/Sports:_____

****

Membership is open to all individuals and sponsorship to all organizations interested in spinal cord injury.

Mark Type of TAX DEDUCTIBLE Individual Membership or Organization Donor Category Desired***

_____Regular-$12
_____Sponsor-$25
_____Patron $50
_____Benefactor-$100
_____Permanent- $1000/lifetime**

_____Bronze Organization-$100-249
_____Silver Organization-$250-499
_____Gold Organization- $500-999
_____Platinum Organization-$1000-2499
_____Diamond Organization-$2500 0r Over.

Please make checks payable to: **NSCIA Derby City Chapter**

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