

◆ THE DERBY CITY NSCIA NEWSLETTER ◆

JUNE 2010

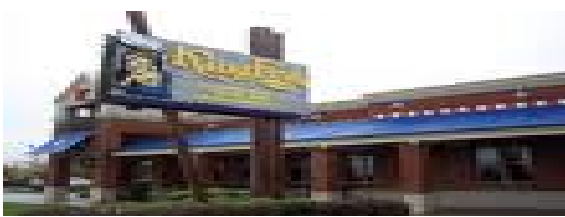
The Derby City Chapter of the National Spinal Cord Injury Association Network- Serving Kentuckiana.

Message From the President

Dear Members & Friends-

**THERE WILL NOT BE A MEETING
IN JUNE. OUR KINGFISH DINNER
HAS BEEN MOVED TO JULY 19TH.
SEE DETAILS BELOW.**

- David Allgood



**COME JOIN US FOR OUR ANNUAL
KINGFISH DINNER**

**MONDAY, JULY 19, 6:00 P.M.
3021 UPPER RIVER ROAD
LOUISVILLE, KY**

**THE CHAPTER WILL PROVIDE
MEALS FOR DUES-PAYING
MEMBERS. ALCOHOLIC
BEVERAGES ARE NOT INCLUDED.**

**WE LOOK FORWARD TO
SEEING YOU THERE!!**



**HAPPY
FATHER'S
DAY!!**

From the Internet-ed

UK/UofL ON CUTTING EDGE OF RESEARCH

A bullet remains lodged in Michelle Alexander's spinal cord nearly six years after her husband shot her four times — instantly paralyzing her — before killing himself in July 2004. Doctors told her she'd probably never walk again. But a rehabilitation strategy being pioneered at the University of Louisville is changing her fate.

Today Alexander uses a walker to get around, takes tentative steps with two canes and gets on a specially designed treadmill four days a week as part of a research study evaluating Locomotor training, which U of L's Susan Harkema helped develop to teach lost skills to broken nervous systems.

It's one of several areas of spinal cord research at U of L and the University of Kentucky, home to 2 of about 10 large centers for such work in the nation.

"Without the research, we wouldn't get anywhere," said Alexander, 39, of Sellersburg, Ind. "Before, I couldn't walk or sit up or eat by myself. ... Now I can do the laundry. I can stand up and cook. ... And, you just feel more whole when you can do things."

About 4,000 people in Kentucky and Southern Indiana live with spinal cord injuries, a small fraction of the national total, which the Christopher & Dana Reeve Foundation estimates at 1.275 million.

Yet Kentucky has become a national hub for spinal cord research because of two funding streams: Bucks for Brains, state money that brings top researchers to the two universities, and the Kentucky Spinal Cord and Head Injury Research Trust, which began funneling some speeding ticket revenue to research 16 years ago.

(Continued On Page Three)

TABLE OF CONTENTS

| | |
|-------------------------------------|---|
| President's Message/Kingfish Dinner | 1 |
| UK/UofL Research | 1 |
| Calendar | 2 |
| Fundraiser at O'Sheas | 5 |
| For Sale | 5 |

Refrigerator Calendar

2010

JUNE

- 7th Mon** Elderly & Disabled Advisory Council Meeting
1:00; TARC; 1000 W. Broadway; Board Room.
- 12th Sat.** Annual Larosa Loop Event held in honor of Ethel Larosa-Klemens, MD former Pediatric Physician at Frazier Rehab Institute. Event includes a 1, 3 & 5 Mile Walk/Roll and a 10 & 25 -Mile Bike/Handcycle ride into beautiful Southern Indiana; \$40.00 donation per group of four or \$15.00 for an individual registration which includes registration, T-shirt and lunch. For more information please call Jill Farmer at 502-582-7618. All proceeds go to support the Pediatric Rehab programs at Frazier Rehab and a Scholarship Fund In Dr. Ethel Larosa-Klemens` name.
- 19th Sat.** Adapted Sports and Fitness Fair; 11:00a.m.—2:00p.m.; Kosair Charities Campus, Eastern Parkway; presented by KIDS Center, Spina Bifida Association of Kentucky, Frazier Rehab Institute and Louisville Metro Parks Adapted Leisure Activities. Lots of exhibitors/vendors, adapted sport demonstrations and free lunch provided.
- 24th Mon** Metro disAbility Coalition Meeting; 3:15 p.m.
Spalding University; 845 S. Third Street; Louisville.
- 26th Sat.** 2010 Todd Crawford Foundation 5K Run, Walk,& Roll benefiting spinal cord injury research; \$25.00 entry fee, T-shirts given to the first 250 people registered. To register for the event or to get more information please call 502-645-9069 or go to www.toddcrawfordfoundation.org.

JULY

- 5th Mon** Elderly & Disabled Advisory Council Meeting
1:00; TARC; 1000 W. Broadway; Board Room.
- 19th Mon** Derby City Chapter-National Spinal Cord Injury Association-Annual Summer Dinner-6:00p.m. at Kingfish Restaurant on Zorn Ave in Louisville. Meal provided by Chapter for dues-paying members. Please call David Allgood to confirm your attendance at (502) 588-8574.
- 26th Mon** Metro disAbility Coalition Meeting; 3:15 p.m.
Spalding University; 845 S. Third Street; Louisville.
- 27th-30th Sun-Wed** Spina Bifida Association National Conference, “Leading the Way to the Future”; Hyatt Regency Hotel , Cincinnati, Ohio. To register or to find out more please visit the website at www.sbaa.org.

For More Information Call
David Allgood at 502-588-8574

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.

OFFICERS

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Visit Our Website at

www.DerbyCitySpinalCord.org

**The Derby City Area Chapter Newsletter is brought
to you through the generous support of Frazier
Rehab Institute**

UK/UofL CONT'D

U of L and UK “are both very excellent research centers ... very respected throughout the scientific community,” said Kim Anderson-Erisman, a spinal cord injury patient and researcher who is education director at the Miami Project to Cure Paralysis, another large research center.

Kentucky scientists are exploring various treatment approaches with the major objective of getting people to walk, but the work also focuses on more modest goals, such as helping those with quadriplegia use their arms.

Such gradual improvements, Kentucky and national experts said, call for an array of treatments, instead of a magic-bullet cure — including rehabilitation, drug therapies, therapeutic hypothermia and electrical stimulation.

“For me, there’s tremendous opportunity here,” said Harkema, director of research at Louisville’s Frazier Rehab Institute. “We’re at a critical juncture.”

Experts elsewhere agreed. “There is momentum now,” said Susan Howley, executive vice president for research at the Reeve Foundation in New Jersey, which funds spinal cord research and advocates for patients. “There is a critical mass of basic understanding of the normal spinal cord and what happens in injury, and that has created a perfect storm.”

Kentucky is at the center of that storm, Howley said, noting that U of L is the lead center for the Reeve Foundation’s NeuroRecovery Network, which links rehabilitation centers providing innovative, activity-based therapies.

On a recent morning, Alexander stood on a treadmill for such therapy at Frazier. With her body weight supported by a harness, a therapist and three techs helped her stay steady while moving her legs correctly. The goal is to gradually use less support as healthy neurons reorganize the nervous system’s circuits.

Later in the session, health workers stopped the treadmill and placed a chair on it. Physical therapist assistant Terri Dugan asked Alexander to sit down and then try getting up. “One, two, three!” Alexander said as she stood, then smiled and gave Dugan a high five.

Spinal cord injuries often steal basic abilities in the prime of life. A UK study found that 1,252 Kentuckians suffered nonfatal spinal cord injuries between 2000 and 2005, the majority younger than 44.

Most injuries don’t fully sever the spinal cord, but instead cause fractures or compressions of the vertebrae, which crush axons, extensions of nerve cells that carry signals up and down the spinal cord. The extent of paralysis depends on the severity of the injury and its location on the cord, and patients often face such complications as pneumonia, pressure sores, sexual dysfunction, and bowel and bladder problems.

(Continued On Page Four)

UK/U of L CONT'D

Dr. Christopher Shields, a Norton Healthcare neurosurgeon, said patients' struggles inspired him to help create U of L's Kentucky Spinal Cord Injury Research Center, which officially was recognized by the university in 2001. In the early 1990s, Shields worked with a Kentucky legislator whose niece was injured in a car crash to develop the speeding-ticket funding program, which at first brought in \$12.50 from each ticket and now gets 6.5 percent of all court costs.

Additional funding for U of L's center comes from Norton, which put \$4 million toward the neuroscience department to help create endowed chairs in spinal cord research, and continues contributing about \$100,000 to \$150,000 a year. The center now has a research budget of \$7.3million, more than half from National Institutes of Health grants.

Shields is no longer with U of L, and the center's scientific director is now Scott R. Whittemore, who came to the university from the Miami Project in 1998 as one of the first Bucks for Brains professors.

Harkema, another Bucks for Brains hire, joined the program in 2005 from the University of California at Los Angeles.

Whittemore said the center has three "legs" — basic animal research, rehabilitation and treatment research, and clinical treatment research. Scientists meet weekly to update one another and look for connections among their work.

"We are the only center that really integrates basic science and clinical research," Whittemore said. "It is unique in the country and in the world."

Whittemore focuses on basic science. He co-directed a team of researchers who recently published a study demonstrating how genetically modified adult stem cells, transplanted into the injured spinal cords of rats, can help restore electrical pathways associated with movement. This helps rats recover by regenerating the myelin that insulates axons. Questions remain about whether this approach may cause tumors, however, so it can't yet be tried in humans.

Colleague Scott Magnuson's research is also at the animal-testing stage; his rehabilitation work uses rodent-sized treadmills and wheelchairs.

Harkema's research applies such basic science to human rehabilitation patients.

"Locomotor training develops the intrinsic capacity of the spinal cord to be smart," said Harkema, the center's rehabilitation research director. "A neuron can change its function, its behavior ... when it's exposed to activity."

Harkema said 89 percent of 300 patients followed nationally by researchers improved some type of function through this therapy. The rate of recovery often depends on how long it's been since the injury, and is often quicker in the very young. But Harkema said, "there's no evidence it's ever too late to do anything."

The extent of recovery also varies. Some people, such as Alexander, make huge gains, while others improve in smaller but significant ways. Larry Biven of Crestwood, who was left a quadriplegic after a car accident 4½ years ago, said the therapy has allowed him to breathe better and improve his bone density. He's now working toward using his arms.

"Do I want to walk someday? Yes," said Biven, 54. "But it's the little things too" — like standing up and walking with help. "It made me feel like a human being again."

About 80 miles away in Lexington, UK's spinal cord research takes place at a center that also tackles brain injury. Its annual budget of \$6.7million is equally divided between the two.

UK's spinal cord work doesn't overlap much with U of L's, but scientists from the two universities occasionally do collaborate. "There's also a friendly rivalry," said James W. Geddes, associate director of the UK Spinal Cord and Brain Injury Research Center.

Like U of L's research, UK's is wide-ranging. It includes finding ways to minimize damage after spinal cord injury, getting nerves to grow new axons and restoring connections in the nervous system. Researchers are also exploring why salamanders can regenerate limbs.

Drug therapy is one promising area being explored at UK. Edward Hall, the center's director, is widely known for a 1990 discovery that giving a high dose of a synthetic steroid within eight hours of a spinal cord injury can improve motor function. In about five years, he said, his center hopes to begin human testing of new drug treatments.

Hall's core faculty includes Alexander "Sasha" Rabchevsky, who uses a wheelchair after being paralyzed from the chest down in a 1985 motorcycle accident. On his office door, near a large tie-dyed peace sign, are small signs saying "Got Mobility" and "life is good."

Rabchevsky's work includes testing compounds that would help protect tissue by stabilizing mitochondria, the so-called powerhouses of cells. He's also looking for answers to a potentially life-threatening condition called autonomic dysreflexia. It's caused by irritants such as sunburn, ingrown toenails or bedsores, and can result in high blood pressure and even strokes.

(Continued On Page Five)

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 Institute, 10th floor Dining Room
220 Abraham Flexner Way, Louisville, KY 40202*

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 | _____ Bronze Organization-\$100-249 |
| _____ Sponsor-\$25 | _____ Silver Organization-\$250-499 |
| _____ Patron \$50 | _____ Gold Organization- \$500-999 |
| _____ Benefactor-\$100 | _____ Platinum Organization-\$1000-2499 |
| _____ Permanent- \$1000/lifetime** | _____ Diamond Organization-\$2500 Or Over. |

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

David Allgood
6703 Triangle Drive
Louisville, KY. 40214

UK/UOFL CONT'D

Rabchevsky said he would love to find new treatments for spinal cord injury complications or new ways to help people like him live more independently.

"Recovery to me is any incremental improvement," Rabchevsky said. "Improving daily quality of life is important."

Dr. Richard Borgens, a neuroscience professor at Purdue University, said that's an important distinction — science likely will continue bringing gradual improvements for people with spinal cord injuries, he said, but it probably won't lift everyone out of wheelchairs any time soon.

"I've been doing this since 1978, and a long time ago I gave up using the word 'cure,'" he said. "I don't believe that's in the cards - not even in the lifetimes of my students."

UK researcher Stephen M. Onifer agreed that recovery isn't all about walking. Onifer is using rats to try to induce "sprouting," or getting axons to grow into fibers that are still intact, with the ultimate goal of helping quadriplegics use their arms.

The UK center also works closely with Cardinal Hill Rehabilitation Hospital in Lexington. Dr. Lumy Sawaki, a center faculty associate and Cardinal Hill endowed scholar, is investigating the use of transcranial magnetic stimulation to improve motor function by exciting brain neurons.

Zack Murphy, 22, was only 16 years old when doctors told him he'd never walk again after a rare spinal cord stroke paralyzed him from the chest down. Just days earlier, he'd been playing golf and training for the mini marathon.

Murphy, of Goshen, did Locomotor training at Frazier in 2007 and in 2008, and gradually learned to walk with a walker. He recently began a new round of the training while also getting therapy to use two canes.

On a recent day, Dugan helped him stretch on a mat, and then had him stand in front of a mirror and work to stay balanced. Finally, Murphy stepped forward with his canes as Dugan held onto him. They walked slowly down a hallway and back, with Murphy dragging part of one foot. "Good job," Dugan said. "Excellent."

Murphy said he plans to keep pushing himself, with an ultimate goal to "walk with no device whatsoever."

Alexander, who is remarried and has a 19-year-old son, nurtures similar big dreams.

"I'd love to go climb rocks. When you can't do something, you want to do it," she said. "You've gotta have the research. It gives us the chance to walk again."

FOR SALE ***

2004 Buick Rendezvous CX, Gold Sport Utility 4D, AWD; 52,953 mi; seats 5—rear compartment contains Sonic scooter Bruno lift; new battery; numerous special features. \$8,800. Call Bryan Fantoni at 502-644-4446 or email at Bryan.Fantoni@mozlaw.com.

Easy Stand Glider 600; like new—barely used; allows transfer, stand and glider movement of legs. Paid \$6,000. Will sell for \$3,000. Call Shirley at 502/228-1271.

93" E150; EZ Lock WC System Elec. w/Quantum 600 wc/swivel captain's chairs/3-way power driver's seat/remote start burglar alarm/front-rear air/power wc lift/new upholstery. \$11,000, negotiable. **(502) 543-5948/(502) 773-2337.**

****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 individuals.*

***Cookbooks for Sale:** Recipes compiled by Chapter members; \$10:00. Call David @ 585-8574.

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

♦ **SCI -Shirts for sale.** S, M, L, XL. David—589-6620.

EAT, DRINK AND RAISE MONEY ***JUNE 28, 2010****O'SHEAS IRISH PUB****956 BAXTER AVE****LOUISVILLE, KY 40204****PROCEEDS TO BENEFIT CENTER FOR ACCESSIBLE LIVING'S RAMPBUILDER PROGRAM.****FOR MORE DETAILS CONTACT KEITH AT 589-6620 OR khosey@calky.org.**

**All profits for the entire day will be donated to the Rampbuilder Program. There is no need to mention that you are with the Center, Just come any time during operation hours, eat and enjoy. The restaurant will take care of the rest.*