

# JOURNAL

THE INSTITUTE FOR REHABILITATION AND RESEARCH

## WINTER 2011

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## TIRR Memorial Hermann Receives Funding to Support a New Spinal Cord Injury Rehabilitation Program

While patients undergoing rehabilitation following spinal cord injury (SCI) are traditionally taught compensatory techniques, emerging research indicates that intentional massed practice of activity-based training may promote cortical reorganization and recovery of arm function after SCI. With funding assistance from the Craig H. Neilsen Foundation as a match for financial support from the Staman Ogilvie Fund, TIRR Memorial Hermann is developing an intensive, function-based initiative to promote upper-extremity recovery after traumatic cervical spinal cord injury.

Known as Spinal Cord Injury Active Recovery of Movement (SCI-ARM), the program will use innovative technology and activity stations to promote upper-limb use after paralysis. "SCI-ARM is based on current, groundbreaking research,"



Rhonda Abbott, P.T.

combines intensive activity-based training with standard rehabilitation protocols to promote the return of upper-extremity function. These programs rely on technology that promotes precise repetition of

movement and provides objective feedback that encourages motivation in our patients."

TIRR's SCI-ARM program revolves around two Hocoma Armeo® systems and six activity stations that will be run by 11 occupational therapists and two technicians. "The program will serve up to 12 cervical SCI



Julie Jennings, P.T., N.C.S.

patients for at least one hour a day, five days a week," says rehabilitation manager **Julie Jennings, P.T., N.C.S.** "The therapy will be

coupled with immediate activity of daily living training to optimize functional carryover."

"We are pleased that this innovative program will be based at TIRR," says **Carl Josehart, CEO**. "TIRR has been designated by the National Institute on Disability and Rehabilitation Research as a Model Spinal Cord Injury System Center since 1972, and we have served more than 300 individuals with cervical SCI in the past two years alone."

*Funding continues on page 7*

## FEATURED IN THIS ISSUE

### **Rhonda Abbott, P.T.**

Director of Therapy Services  
Director of Clinical Programs

### **Allison Clark, Ph.D.**

Investigator  
Assistant Professor of Medicine, Baylor College  
of Medicine

### **Lourdes Cuellar, R.Ph., F.A.S.H.P.**

Administrative Director of Pharmacy and Clinical  
Support Services

### **Teresa Del Castillo, L.C.S.W., L.M.F.T.**

Licensed Clinical Social Worker  
Licensed Marriage and Family Therapist

### **Mary Ann Euliarte, R.N., C.R.R.N.**

Chief Nursing Officer

### **Gerard E. Francisco, M.D.**

Chief Medical Officer  
Chair of the Department of PM&R, The University  
of Texas Health Science Center at Houston  
(UTHealth) Medical School

### **Ann Gutierrez, R.N., C.R.R.N.**

Rehabilitation Nurse

### **Julie Jennings, P.T., N.C.S.**

Rehabilitation Manager  
Program Director for Spinal Cord Injury and  
Amputee Program

### **Carl Josehart**

TIRR CEO

### **Cindy B. Ivanhoe, M.D.**

Attending Physician, Brain Injury and Stroke  
Program  
Associate Professor of PM&R, Baylor College  
of Medicine  
Adjunct Associate Professor of PM&R, The  
University of Texas Health Science Center at  
Houston (UTHealth) Medical School

### **Vinh Nguyen, J.D.**

Director of Legal Research, DBTAC Southwest  
ADA Center

### **Monique Pappadis, C.H.E.S., C.C.R.P.**

Research Assistant, Brain Injury Research Center

### **Angelle Sander, Ph.D.**

Director, Brain Injury Research Center  
Associate Professor of PM&R, Baylor College  
of Medicine

### **Christian Shenouda, M.D.**

Former Resident

### **Mark Sherer, Ph.D.**

Senior Scientist  
Director of Research and Director of  
Neuropsychology  
Clinical Professor of PM&R, Baylor College  
of Medicine

### **Barry S. Smith, M.D.**

Consulting Physician

### **Margaret Struchen, Ph.D.**

Research Scientist  
Assistant Professor of PM&R, Baylor College  
of Medicine

### **Wes Tidwell**

Director of Hospital Operations

### **Lisa Wenzel, M.D.**

Attending Physician  
Assistant Professor of PM&R, Baylor College  
of Medicine

### **Wendy Wilkinson, J.D.**

Director, DBTAC Southwest ADA Center

## MESSAGE FROM THE CEO

At TIRR Memorial Hermann we continue to drive innovation through the accomplishments of our researchers. Last year, we moved our research initiatives to a new level, going



*Carl E. Josehart, CEO*

beyond studies in traditional rehabilitation medicine to include research ranging from the spiritual wellbeing of our patients to the employment of

people with disabilities. Research done on our Campus is conducted by physicians and scientists, and also by our therapists, nurses, chaplain and the residents who rely on us to advance their knowledge in specialized areas of rehabilitation medicine, even as they advance ours. In this issue, we report preliminary results in the second of three studies being conducted by our Independent Living Research Utilization program's DBTAC Southwest ADA Center. Funded by the National Institute on Disability and Rehabilitation Research, the study provides

qualitative data on the careers of people with disabilities who work in the healthcare industry.

Led by principal investigator Angelle Sander, Ph.D., researchers at TIRR examined how perceptions of community integration following traumatic brain injury vary among racial and ethnic groups. In a meta-analysis conducted during his residency at TIRR, Christian Shenouda, M.D., hypothesized that omega fatty acids have the potential for broader use in the facilitation of neurological recovery.

Over the years, we've expanded our *Accolades*, *In Print* and *On the Podium* sections in the TIRR Journal. We're proud of the accomplishments of our staff members, which benefit individual patients like Logan Schaefer, whose remarkable recovery following traumatic brain injury is chronicled in this issue.

As we begin a new year, I'm grateful for the opportunity to work with such a talented and caring team.

**Carl E. Josehart**  
*Chief Executive Officer*  
*TIRR Memorial Hermann*

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*We have opportunities for outstanding rehabilitation professionals. If you are interested in joining our team at U.S. News & World Report's No. 5 rehabilitation hospital, contact Jude Lemaire, recruitment consultant, at 713.797.7281 or [Jude.Lemaire@memorialhermann.org](mailto:Jude.Lemaire@memorialhermann.org). All available opportunities can be viewed at [memorialhermann.org](http://memorialhermann.org).*

[www.tirr.org](http://www.tirr.org), [www.ilru.org](http://www.ilru.org)

## Two Thumbs Up for Logan Schaefer

Coach Vic Schaefer was making coffee in a hotel room in Cincinnati when he received the phone call every parent fears. It was 8:35 a.m. on July 12, 2010. The voice on the other end of the line was an emergency medicine specialist at East Texas Medical Center-Crockett, where his 14-year-old son Logan Schaefer had been transported following a wakeboarding accident. The physician told Schaefer that Logan was unconscious, unresponsive and seizing following a traumatic brain injury, and recommended emergency transport to East Texas Medical Center (ETMC)-Tyler, the closest hospital with a Level I trauma center.

Schaefer, who is the women's associate head basketball coach at Texas A&M University, cut short his Ohio recruiting trip and arrived in Dallas on a 2:30 p.m. flight from Cincinnati. As he made his way home to Texas, he learned the details of Logan's accident. While wakeboarding at Frontier Camp, a Christian-based adventure retreat in East Texas, Logan carved into the wake, went airborne and lost his balance mid-air. As the board landed he spun backwards, fell and hit his head in the water. He seemed uninjured after the fall, but on a second run through the water, his head began to throb. He vomited twice and passed out when he returned to shore. Staff members at Frontier Camp called 911.

At ETMC, neurosurgeon Thomas Graham, M.D., performed an emergency craniotomy to relieve pressure on the

brain caused by a subdural hematoma. He was also able to stop the bleed. "That Dr. Graham could find the bleeding vein and remove it was just one of many miracles we would experience during Logan's recovery," Schaefer says. The following day Logan awakened just long enough to give his parents the two-thumbs-up sign.



*Logan Schaefer*

On July 23, after 11 touch-and-go days in intensive care at ETMC, Logan was transferred to TIRR Memorial Hermann for rehabilitation. "When we arrived at TIRR, we knew he was in dire need of help," Schaefer recalls. "He couldn't walk, and his speech was barely an audible whisper. He couldn't hold a fork, and he could hardly hold his head up. When we walked into the building, we saw all those former patients' success stories on the wall and knew that many of those people had been at TIRR for months. We were prepared to stay as long as we had to and do whatever it took to get our son back."

Logan arrived at TIRR on a Thursday, was assessed by physical medicine and rehabilitation specialist Cindy Ivanhoe, M.D., on Friday and

began therapy on Saturday. "As a parent you want someone to tell you that in five months your son will be up there on the Wall of Fame with the other success stories, but no one can promise anything about a brain injury. I showed Dr. Ivanhoe a photo on my cell phone of Logan and his twin sister Blair smiling, and asked her if we'd ever see that smile again. She said, 'Yes, you'll get the smile back. I just can't tell you when.'"

"The following week his therapy continued, and that weekend we saw another unbelievable miracle when Logan walked down the hallway unassisted," Schaefer says. "His balance wasn't great, and he had some problems with drifting, but he was walking on his own."

Prayers, cards and flowers came from friends and supporters around the country. "We had so many friends in College Station and colleagues across the country who wanted to help," he says. "We were very grateful for their support, but we felt the need to keep visitors and distractions to a minimum so we could focus all our attention on Logan."

Friends responded by starting the "Lift Logan Up" campaign to provide support to the family during his recovery. Lina Lawson, co-owner of Twinz Co. Marketing, and her husband Kenny Lawson, CEO and president of C. C. Creations, produced Lift Logan Up T-shirts and sold them for \$10 each.

The Schaefers stayed by Logan's side during his 28-day hospitalization at TIRR, coaching him through physical and occupational therapy.

*Thumbs Up continues on page 7*

## Southwest ADA Center and SEDL Complete the Second in a Series of Research Studies on Disability and Employment Outcomes

Results are being analyzed in a qualitative study of the careers of people with disabilities who work in the healthcare industry. The research, sponsored by TIRR Memorial Hermann's Independent Living Research Utilization (ILRU) program, will position the ILRU's DBTAC Southwest ADA Center to inform the public about how better to recruit, hire and retain people with disabilities in the expanding healthcare industry.

The study is one of three conducted in response to a National Institute on Disability and Rehabilitation Research (NIDRR) requirement that Disability and Business Technical Assistance Centers (DBTACs) invest at least 10 percent of their total budget in research. NIDRR provides funding for the nation's 10 DBTACs.

"NIDRR's goal is to further strengthen the nation's assistance network by expanding its core activities beyond technical assistance and ADA compliance to include research," says **Wendy Wilkinson, J.D.**, director of the Southwest ADA Center. "Examining the experiences of people with disabilities who are employed in healthcare in Texas maximizes the utility of the study's findings for the population we serve, which also includes residents of Arkansas, Louisiana, New Mexico and Oklahoma. Healthcare is a high-growth industry in Texas, and it's also where most of the growth in our region is projected to occur."

Lead researcher Kathleen Murphy, Ph.D., conducted interviews with Texans who work in various sectors of the healthcare industry - employees with disabilities and their colleagues, supervisors and employers. "While we're still in the process of analyzing the data collected from study respondents, we can report some initial

impressions based on a first pass through the responses," says Dr. Murphy, who is project director at SEDL, a private, nonprofit education research, development and dissemination corporation based in Austin, Texas. Her co-investigator in the study is **Vinh Nguyen, J.D.**, attorney and director of legal research at the Southwest ADA Center.

Data were collected from April 2009 through September 2010. During that time, 48 interviews were conducted, including 27 with employees who have disabilities, 12 with people who work with someone with a disability and nine individuals who supervise, employ or manage someone with a disability. The interviewees live in 13 Texas cities and towns, and about half are residents of Houston. Fourteen respondents worked in acute care hospitals - the largest type of employer represented; the remainder worked in various settings ranging from home healthcare to mental health agencies to a prosthetics lab. Their disabilities included mental illness, autoimmune or chronic diseases, sensory or mobility problems, and former substance abuse.

Dr. Murphy reports the following general impressions:

- People tend not to disclose their disabilities - and forfeit the accommodation - if disclosure is not required, or they will change jobs to avoid having to disclose.
- This is especially true for people with mental illness, who may self-accommodate by choosing an occupation where they do not have to disclose or in which they have control over the hours they work.

- In some instances, the experience of disability is marketable. Individuals recovered from chemical dependency, for example, may be sought after by substance-abuse outreach organizations or educational awareness groups.
- There is some expectation among the people interviewed that healthcare is more receptive to the hiring of people with disabilities, but other respondents believed the opposite, especially in occupations that require certifications.
- Colleagues value communication related to disabilities and reported that they would like employers to educate them about disability issues related to etiquette, accommodations and so on.
- Families were almost universally praised for the support they provided members with disabilities.
- In general, respondents were not underemployed; they worked in jobs that match their education and training.

ILRU and SEDL expect to present full results at the 2011 ADA National Network Research Conference being organized by Virginia Commonwealth University's Coordination, Outreach and Research Center (CORC). CORC is funded by NIDRR to coordinate the research conducted by the 10 DBTACs. ♦

*For more information on disability research, please call Wendy Wilkinson at 713.520.0232.*

## Perceptions of Community Integration in an Ethnically Diverse Sample

A life-altering event, traumatic brain injury (TBI) can have substantial negative impact on the lives of patients and their families, colleagues and friends. Physical, cognitive and psychological impairments can cause aggression, anxiety and depression, and affect close relationships and reintegration into the community.

In an article published in the *Journal of Head Trauma Rehabilitation*, researchers at TIRR Memorial Hermann examined how perceptions of community integration vary among racial and ethnic groups<sup>1</sup>. Led by principal investigator **Angelle Sander, Ph.D.**, director of TIRR's Brain Injury Research Center and an associate professor of physical medicine and rehabilitation at Baylor College of Medicine, the research team interviewed 58 blacks, 57 Hispanics and 52 whites with TBI who were living in the community six months post injury.

**D**R. SANDER URGES PHYSICIANS OUTSIDE THE REHABILITATION COMMUNITY WHO TREAT PEOPLE WITH TBI FOR AN UNRELATED CONDITION TO ASK SIMPLE QUESTIONS ABOUT HOW THE INDIVIDUAL IS MANAGING HOME ACTIVITIES AND SOCIALIZING IN THE COMMUNITY, AS WELL AS WORKING.

“The significance of changes that occur in an individual’s life after traumatic brain injury usually corresponds to the changes that occur in their participation in roles that are valued by society,” Dr. Sander says. “Research studies conducted over several decades have shown that people with TBI are less likely to live independently and less likely to

participate fully in employment, housekeeping activities, parenting and leisure activities. There’s also evidence suggesting that the impact of TBI on community participation may be greater for racial and ethnic minorities than for whites.”

The researchers used open-ended interview questions and a question-



*Angelle Sander, Ph.D.*

naire to rate the importance of community integration activities. “We learned that blacks and Hispanics placed more emphasis on domestic activities as measures of community integration than whites did,” Dr. Sander says. “For example, blacks and Hispanics rated parenting and other domestic activities just as highly as they did being able to return to work.”

The investigators also concluded that feeling integrated into the community relates to aspects of the environment, as much as to involvement in specific activities. “Environmental barriers can be just as important as injury-related changes,” she says. Perceived barriers include environmental and social barriers; injury-related cognitive and physical changes; dissimilarities to others; relocation; and financial issues.

“We learned that the accepted definition of successful outcomes or successful community integration does not always coincide with the

definition used by people with TBI,” Dr. Sander says. “The lesson for the rehabilitation community is to become more flexible in how we integrate the priorities and perceptions of TBI patients and clients into their rehabilitation programs. We need to make sure that we include among our measures of success those outcomes that TBI patients themselves value and consider important to their quality of life.”

Dr. Sander urges physicians outside the rehabilitation community who treat people with TBI for an unrelated condition to ask simple questions about how the individual is managing home activities and socializing in the community, as well as working. “If patients indicate that they are having problems in these areas, you may want to consider referring them to a physical medicine and rehabilitation specialist or to an outpatient rehabilitation program.” ♦

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*For more information on the study, which was funded by the National Institute on Disability and Rehabilitation Research, contact Angelle Sander, Ph.D., at [asander@bcm.edu](mailto:asander@bcm.edu).*

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<sup>1</sup> Sander AM, Pappadis MR, Clark AN, Struchen MA. Perceptions of Community Integration in an Ethnically Diverse Sample. *Journal of Head Trauma Rehabilitation*. 2010:e-publication ahead of print.

## The Role of Omega Fatty Acids in Neurological Recovery

Research has shown that omega fatty acids (OFAs) are beneficial in the treatment of various conditions, including hyperlipidemia, coronary artery disease and basic inflammation processes. They are also known to be involved in the production of bioactive molecules, including leukotrienes, prostaglandins and thromboxanes. In addition, researchers have shown that OFA content in cell membranes increases fluidity and allows for enhanced cellular function, homeostatic regulation and tissue regeneration<sup>1</sup>, and that this fluidity translates to enhanced biochemical function.<sup>2</sup> In research conducted during his residency at TIRR Memorial Hermann, **Christian Shenouda, M.D.**, hypothesized that omega fatty acids have the potential for broader use in the facilitation of neurological recovery.

“Initially, I set out to do a meta-analysis on the role of omega fatty acids in cognition,” says Dr. Shenouda, who will complete an acquired brain injury fellowship at the University of Washington in Seattle in June 2011. “But I discovered that there were inherent flaws in these studies as cognition is an umbrella term that encompasses memory, concentration, judgment and many other functions. In the process of researching the effects of omega fatty acids, I came across literature suggesting that they facilitate the development of nerve cells in spinal cord injury and traumatic brain injury patients. So the question was, ‘Does the sprouting of new nerve cells lead to increased cognition?’ I set out to examine whether we could make that leap.”

In a meta-analysis of studies done over the past decade, Dr. Shenouda

examined past, current and possible future directions in the use of omega fatty acids in neurological recovery. He concluded that the substitution of the OFA docosahexaenoic acid (DHA) for arachadonic acid (AA) in cellular membranes has a drastic effect on neural tissue at various sites. “Studies of cerebral ischemia show decreased lesion size and improved histological outcomes,” he says. “These compounds were also able to induce neurogenesis in hippocampal cultures, with neurons showing increased length and branching. This information, coupled with their ability to decrease inflammation via the AA pathway, suggests that omega fatty acids may be ideal candidates for inclusion in a treatment plan for brain injury.”

He also notes that OFA research has been extended to the setting of acute

IN THE PROCESS OF RESEARCHING THE EFFECTS OF OMEGA FATTY ACIDS, DR. SHENOUDA CAME ACROSS LITERATURE SUGGESTING THAT THEY FACILITATE THE DEVELOPMENT OF NERVE CELLS IN SPINAL CORD INJURY AND TRAUMATIC BRAIN INJURY PATIENTS.

spinal cord injury. “Animal models given omega fatty acids showed decreased lesion size and better functional outcomes with administration by mouth and intravenously,” he says. “Because omega fatty acids have little or no side effects, they have potential for use as first-line agents at the onset of injury, if not as an adjunct to current therapies.”

Dr. Shenouda suggests that future research might examine the benefits of each type of omega fatty acid – particularly DHA, eicosapentaenoic

acid (EPA) and  $\alpha$ -Linolenic acid (ALA) – and include clinical trials. “Data exist that show the potential health benefit of long-chain omega fatty acids, but at this point we don’t have any evidence from human trials,” he says.

For the average consumer of OFAs, Dr. Shenouda advises reading the labels. “If you’re going to go to the trouble of taking omega fatty acids as a supplement, make sure the brand you buy includes high amounts of the most potent OFAs – EPA and DHA. Many supplements contain a majority of ALA and while there’s some conversion of ALA to the more powerful EPA and DHA, the interconversion is limited.”

Dr. Shenouda’s paper “Omega Fatty Acids in Neurological Recovery” was recognized by the Baylor College of Medicine/The University of Texas Health Science Center at Houston (UTHealth) Medical School Alliance for Physical Medicine and Rehabilitation as the Manuscript of the Year for his graduating class and has been submitted for publication. ♦

<sup>1</sup> Kidd PM. Omega-3 DHA and EPA for Cognition, Behavior, and Mood: Clinical Findings and Structural-Functional Synergies with Cell Membrane Phospholipids. *Alternative Medicine Review* 2007;12:3, 207-227.

<sup>2</sup> Else PL, Hulbert AJ. Membranes as Metabolic Pacemakers. *Clinical and Experimental Pharmacology and Physiology* 2003;30:559-564.

**Funding** continued from page 1

Located in southern California, the Craig H. Neilson Foundation was established in 2002 to find a cure for spinal cord injury. The foundation supports cutting-edge research that seeks to understand the biological basis for recovery of function after SCI and translate these findings to the clinical setting; clinical research to develop new treatments for those

living with SCI; and innovative rehabilitation programs for people living with SCI throughout the United States.

The Houston-based Staman Ogilvie Fund for Spinal Cord Injury Recovery, Rehabilitation and Research was created to assist individuals whose lives have been disrupted by spinal cord injury (SCI), brain trauma or neurological disorders. The fund's

objective is to raise \$10 million for the development of new technologies to increase movement for those with SCI through regenerative research, rehabilitation, robotics and adaptive technology. To date, more than \$5 million has been contributed toward the goal, which will benefit TIRR and the Mischer Neuroscience Institute at Memorial Hermann-Texas Medical Center. ♦

**Thumbs Up** continued from page 3

The support of family and friends helped keep him optimistic. During his stay, Texas A&M head football coach Mike Sherman visited the hospital and presented Logan with an official 12th Man jersey, inviting him to be an honorary captain at the first game of the season.

On August 27, 2010, 39 days after his accident, Logan walked out of TIRR. A week later on September 4, five days after his 15th birthday, he was introduced as honorary captain at the Texas A&M-Stephen F. Austin State University football game. A video shown on the football field's big screen chronicled Logan's journey from coma to Kyle Field.

"The image of Logan giving two thumbs up on the big video board is indelibly engraved in my mind," his father says. "He's tougher than anyone I've ever seen, and I've been coaching for 25 years. Logan has a great work ethic, tremendous inner strength and an outstanding attitude. He knows what hard work is because that's the way we live in our house. We were outside the box with therapy within two weeks. He didn't recover overnight, but every day he took one step further.

"The doctors, nurses, therapists and techs at TIRR are amazing," he adds. "At night there's a peace that's comforting, but every morning that place comes alive. By 7:30 it's rockin' and rollin' until 5:30 or 6 in the evening. They are an incredible group of caregivers with enormous enthusiasm for their work."

On October 11, Kenny and Lina Lawson held a press conference in College Station and presented two checks - each for \$3,576 - to East Texas Medical Center-Tyler and the Memorial Hermann Foundation. The funds were raised through the Lift Logan Up campaign. "When Lina and Kenny asked us what we wanted to do with the profits, we said let's give back to the people who have given so much to us," Schaefer says.

In early November 2010, Logan was cleared to return to baseball in the spring. On Friday, November 12, he ran his first mile with his father after the accident. "It was a pretty special run, knowing that just months ago he was fighting for his life. First you're praying for his life. Then you're praying for his quality of life. At one time I thought we might still be at TIRR today. But with the greatest of care and by the grace of God, Logan made an unbelievable recovery. He is our miracle! We are so thankful for everyone who played a role in his rehab." ♦

## TIRR IN THE NEWS

**Katy Hayes**, a mother of three who had all four limbs amputated after contracting a rare flesh-eating bacteria, underwent inpatient therapy at TIRR Memorial Hermann to facilitate use of her upper- and lower-limb prostheses.

<http://www.khou.com/news/local/Kingwoods-miracle-mom-Katy-Hayes-learning-to-live-without-limbs-106085428.html> ♦

## IN PRINT

*Bold print indicates that the person is affiliated with TIRR.*

Hart T, **Sherer M**, Temkin N, Whyte J, Dikmen S, Heinemann AW, Bell K. Participant-proxy agreement on objective and subjective aspects of societal participation following traumatic brain injury. *Journal of Head Trauma Rehabilitation* 2010;25:339-348.

Sady MD, **Sander AM**, Clark AN, **Sherer M**, Nakase-Richardson R, Malec JF. Relationship of pre-injury caregiver and family functioning to community integration in adults with traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*. 2010;91:1542-50. ♦

### TIRR and Houston Metro Partner to Better Serve Riders with Disabilities

Representatives from Houston Metro have begun discussions with social workers, therapists and senior leadership at TIRR Memorial Hermann with the goal of creating positive public transportation experiences for riders with disabilities.

Led by TIRR clinical social worker **Teresa C. Del Castillo, L.C.S.W., L.M.F.T.,**



*Teresa Del Castillo, L.C.S.W., L.M.F.T.*

and Art Jackson, director of transportation programs and customer care at Houston Metro, the initiative will involve periodic Metro display bus visits

to the hospital for the use of inpatients during therapy.

“All Metro buses are accessible with ramps or lifts and securement areas to accommodate riders in wheelchairs,” says Mary Ann Dendor, ADA administrator for Houston Metro. “But for new riders with disabilities, boarding the bus and maneuvering to the securement area can be intimidating. By working with TIRR patients before they go on the road with us, we hope to remove all the unknowns associated with using public transportation.”

“Houston Metro transports thousands of customers with disabilities every day, and we work hard to make sure their transit experiences are positive,” says Jackson, a former TIRR patient whose profile is among those hung on the hospital’s Wall of

Fame. “We’re grateful to TIRR for giving us a great opportunity to be creative and look outside the box for new ways to help our riders with disabilities.”

Del Castillo says TIRR and Houston Metro plan to have the program up and running during the first quarter of 2011 for patients who would like to use Houston Metro’s bus and light rail service after their discharge. “The program gives both partners an opportunity to continue to raise each other’s awareness of issues facing riders with disabilities. Having access to transportation is paramount to successful community integration.”

Also in the planning stages is a spring “Accessibility Day,” to be sponsored jointly by the two organizations for TIRR patients and their families. Metro will provide a bus and a paratransit van; staff members will be on hand to provide information about local bus routes, as well as METRORail and METROLift services.

### TIRR Memorial Hermann Hosts Inaugural Research Luncheon

Joel Stein, M.D., psychiatrist-in-chief at New York-Presbyterian Hospital in New York City, delivered the first Charles C. Beall Lecture on November 9, 2010, at the inaugural TIRR Memorial Hermann Research Luncheon in Houston. The luncheon was the first of a series of annual donor events focused on research under way at TIRR.

About 50 TIRR donors, patients, family members, physicians and scientists attended the event, which was hosted by TIRR supporters



*Jim and Linda Winne*

Lynda and Jim Winne; **Carl Josehart, CEO; Gerard Francisco, M.D., CMO; Mark Sherer, Ph.D., Director of Research;** and the

Memorial Hermann Foundation.

Beall, who died in February 2010, served TIRR for 10 years as CEO and for 29 years as a board member. Dr. Stein, whose address was entitled “The Real Iron Man: Advancing Rehabilitation through Technology,” is professor and chair of the department of Rehabilitation Medicine at the Columbia University College of Physicians and Surgeons, and professor and chief of the division of Rehabilitation Medicine at Weill Cornell Medical College in New York City.

### Patient Care Unit Renovations Completed

The redesign of TIRR Memorial Hermann’s oldest remaining patient care unit was completed in two phases in December and January. The renovation added four private rooms to serve brain injury patients.

Two four-bed wards were converted into semiprivate rooms, therapy space and a conference room. “In addition to adding patient rooms, our focus during the renovation was to increase workflow efficiency,” says Wes Tidwell, director of hospital operations. Memorial Hermann invested approximately \$1 million in the renovation. ♦



# ACCOLADES

## Ann Gutierrez Receives 2010 ARN Award

The Association of Rehabilitation Nurses (ARN) has recognized TIRR Memorial Hermann nurse **Ann Gutierrez, R.N., C.R.R.N.**, with the 2010 Educator Role Award for her contributions to the advancement of rehabilitation nursing care.

“We are extremely proud of Ann,” says chief nursing officer **Mary Ann Euliarte, R.N.** “She truly deserves this award. Her entire career has been devoted to the practice and advancement of rehabilitation nursing, patient care and education.”

Nominated by her colleague, **Linda Arfele, R.N.**, Gutierrez was described as an exceptional nurse who has mentored and inspired her peers in all aspects of rehabilitation nursing. ARN presented the award to Gutierrez at their annual conference in Orlando, Florida.

**G**UTIERREZ WAS DESCRIBED AS AN EXCEPTIONAL NURSE WHO HAS MENTORED AND INSPIRED HER PEERS IN ALL ASPECTS OF REHABILITATION NURSING.

“I feel so blessed and honored to receive this award,” says Gutierrez, a rehabilitation nurse for 32 years. “As a rehab nurse, I am able to take part in changing a patient’s life. I help patients progress from not being able to feed themselves or take a step to being able to walk again. I truly love what I do.”



*Ann Gutierrez, R.N., C.R.R.N.*

## Barry Smith Receives the Krusen Lifetime Achievement Award

TIRR consulting physician **Barry S. Smith, M.D.**, received the 2010 Frank H. Krusen, M.D., Lifetime Achievement Award at the American Academy of Physical Medicine & Rehabilitation (AAPM&R) annual meeting held in November in Seattle. The award, which is the academy’s highest honor, recognizes physical medicine and rehabilitation specialists who have made outstanding contributions to the field in patient care, research, education and administration, and have served the profession through involvement in AAPM&R activities. Recipients of the gold medallion are selected based on their outstanding and unique contributions to the specialty.

**Lourdes Cuellar, R.Ph., F.A.S.H.P.**, was co-chair of the Access to Healthcare section for the Texas Statewide Health Coordinating Council’s proposed State Health Plan for 2011-2016. The council has chosen to study and evaluate several topics that directly affect healthcare and workforce issues.

**Cindy B. Ivanhoe, M.D.**, was invited to serve on the American Academy of Physical Medicine and Rehabilitation Task Force on Mild Traumatic Brain Injury. She also served as co-chair



*Lourdes Cuellar, R.Ph., F.A.S.H.P.*



*Cindy Ivanhoe, M.D.*

of the Ipsen Pharmaceutical Advisory Board on Cervical Dystonia in Seattle on Nov. 1-2, 2010.

**Joni McGhee, O.T./L.**, was recognized with a service award by her colleagues in the Texas Occupational Therapy Association (TOTA) for her role as the appointed TOTA state legislative chair, a position she held for the past two years. The award was presented at TOTA’s Mountain Central Annual Conference held in Sugar Land, Texas, in October 2010.



*Monique Pappadis, C.H.E.S., C.C.R.P.*

**Monique Pappadis, C.H.E.S., C.C.R.P.**, has been appointed to the TIRR Research Council at the level of investigator.



*Mark Sherer, Ph.D.*

**Mark Sherer, Ph.D.**, was appointed as section editor for the *Archives of Physical Medicine and Rehabilitation*.



*Lisa Wenzel, M.D.*

**Lisa Wenzel, M.D.**, was named chair of the Christopher and Dana Reeve Foundation NeuroRecovery Network Health Committee in July 2010. ♦



## ON THE PODIUM

**Atkinson D.** Interrelation of Trunk Scale Scores and Functional Outcome Scores. Poster presented at the 4th National Spinal Cord Injury Conference, Niagara Falls, Ontario, Oct. 28, 2010.

**Clark AN.** Traumatic Brain Injury, Secondary Issues and Accommodations. Presented at Expanding Horizons: 2010 Institute on Learning Differences Conference, Cypress, Texas, Nov. 12, 2010.

**Clark AN, Struchen MA.** Interpersonal Process Recall to Improve Social Communication. Presented at the American Congress of Rehabilitation Medicine Annual Meeting, Montreal, Oct. 21-24, 2010.

**Davis K, Gutierrez A.** What's in Your Toolbox; Utilizing Advanced Modalities in an Inpatient Rehabilitation Setting. Posters presented at the Association of Rehabilitation Nurses Conference, Orlando, Fla., Sept. 29-Oct. 3, 2010.

**Davis K, Roberts D.** Can All the Information Fit on One Arm? Poster presented at the Association of Rehabilitation Nurses Conference, Orlando, Fla., Sept. 29-Oct. 3, 2010.

**Donovan WH.** Delivered the Sir Ludwig Guttman Memorial Lecture at the Annual Scientific Meeting of the International Spinal Cord Society (ISCoS), New Delhi, India, Oct. 30, 2010. Manuscript to be published in *Spinal Cord*.



*William H. Donovan, M.D.*

**Dijkers M, Bushnik T, Heinemann A, Libin A, Sherer M.** Assessing the Quality and Applicability of Systematic Reviews - A Systematic Approach. Symposium presented to the meeting

of the American Congress of Rehabilitation Medicine, Montreal, Oct. 21, 2010.

**Euliarte MA, Ramirez R.** Recruitment and Retention Challenges and Strategies in the Rehabilitation Setting. Poster presented at the Association of Rehabilitation Nurses Conference, Orlando, Fla., Sept. 29-Oct. 3, 2010.

**Gettleman M, Kern M, Lantz B, Lantz E.** Planes, Trains and Automobiles: Travel After Spinal Cord Injury. Workshop presented at the 4th National Spinal Cord Injury Conference, Niagara Falls, Ontario, Oct. 28, 2010.

**Giacino J, Whyte J, Bell K, Brockway J, Sherer M.** An Experience-based Discussion of Challenges to Conducting Multi-center Clinical Trials in Rehabilitation. Symposium presented to the meeting of the American Congress of Rehabilitation Medicine, Montreal, Oct. 20, 2010.

**Graves D.** All Limbs Lead to the Trunk: The Rationale and Methods in the Development of the Thoracic-Lumbar Scale. Presented as the keynote address at the 4th National Spinal Cord Injury Conference, Niagara Falls, Ontario, Oct. 28, 2010.

**Graves D.** The Trunk Scale: Thoracic-Lumbar Control Scale for Use in Spinal Cord Injury Research. Presented at NeuroTalk 2010, Singapore, July 28, 2010.

**Henry E.** Management of the Patient with Spinal Cord Injury. Presented at the Alabama Occupational Therapy Association Annual Conference, Orange Beach, Ala., Sept. 10-12, 2010.

**Henry E, Johnston C.** Challenge Yourself, Challenge Your Patient: Play Softball. Presented at the Texas Occupational Therapy Association's Mountain Central Annual Conference, Sugar Land, Texas, Oct. 2010.

**Ifejika-Jones N, Francisco GE, Grotta JC, Harun N.** Urinary Tract Infection is

a Negative Predictor of Post-stroke Disposition: Findings from The University of Texas Health Science Center's Houston Stroke Registry. Poster presented at the American Academy of Physical Medicine & Rehabilitation Annual Conference, Seattle, Nov. 3-7, 2010.

**Ivanhoe CB.** Updates on Spasticity Assessment and Management. Advisory Board - Intrathecal Baclofen Therapy: Clinical Outcomes Updates in Management; Advisory Board - Ultrasound-Guided Injection. Sponsored by the American Academy of Physical Medicine & Rehabilitation, Seattle, Nov. 2-3, 2010.

**Ivanhoe CB.** Incorporating Neuromodulation Therapies into Practice. Presented at the American Academy of Physical Medicine & Rehabilitation Annual Conference, Seattle, Nov. 3-7, 2010.

**Ivanhoe CB.** Xeomin Product Profile. Presented at Merz Product Theater, Seattle, Nov. 5, 2010.

**Li S, Chang S, Francisco GE.** Botulinum Toxin Type A Injection Improves Voluntary Motor Control After Stroke: A Case Report. Poster presented at the American Academy of Physical Medicine & Rehabilitation Annual Conference, Seattle, Nov. 3-7, 2010.

**Martinez P.** Rehabilitation Model of Care: Working Together To Show We Care. Poster presented at the Association of Rehabilitation Nurses Conference, Orlando, Fla., Sept. 29-Oct. 3, 2010.

**Mekky M.** Barriers to Adequate Nutrition in the Spinal Cord Injury Population. Presented at the American Speech-Language-Hearing Association Convention, Philadelphia, Nov. 18-20, 2010.

*On the Podium continues on page 11*

Nakase-Richardson R, **Sherer M**, Seel R, Hart T, Hanks R, Arango-Lasprilla JC, Yablon S, **Sander AM**, Walker W, Grote M, Kittleson J, Hammond F. Comparison of the Russell and Mississippi Post-traumatic Amnesia Classifications Intervals in Predicting One-year Productivity: An Analysis of the Traumatic Brain Injury Model System National Database. Paper presented to the meeting of the American Congress of Rehabilitation Medicine, Montreal, Oct. 22, 2010.

**Pappadis MR**, **Sander AM**. Impact of Traumatic Brain Injury on Quality of Life and Self-Concept: Perspectives of Survivors in an Ethnically Diverse Sample. Presented at the American Congress of Rehabilitation Medicine Annual Meeting, Montreal, Oct. 21-24, 2010.

**Potter E**, **Lantz E**, **Laredo R**. Incorporating Clinicians with Disabilities in the Rehabilitation Team. Presented at the Texas Occupational Therapy Association's Mountain Central Annual Conference, Sugar Land, Texas, Oct. 2010.

**Sherer M**. Evaluation of Posttraumatic Confusion/Amnesia and Implications for Outcomes. Invited presentation to the 31st Annual Neurorehabilitation Conference on Traumatic Brain Injury, Stroke, and Neurologic Disorders, Boston, Nov. 6, 2010.

**Sherer M**. Assessment and Treatment of Impaired Self-Awareness. Invited presentation to the 31st Annual Neurorehabilitation Conference on Traumatic Brain Injury, Stroke, and Neurologic Disorders, Boston, Nov. 6, 2010.

**Sherer M**. Post-traumatic Amnesia: Measurement and Relationship to TBI Outcome. Invited presentation to residents at the Baylor College of Medicine/University of Texas Health Science Center at Houston (UTHealth) Medical School Alliance for Physical

Medicine and Rehabilitation, Houston, Sept. 17, 2010.

**Sherer M**. Acute Confusion in Patients with Acquired Brain Injury. Invited presentation to the clinical staff of Methodist Rehabilitation Center, Jackson, Miss., Sept. 20, 2010.

**Sherer M**. Phenomenology and Prognostic Significance of Acute Confusion in Early Recovery from Traumatic Brain Injury. Invited presentation to the Center for Translational Injury Research, The University of Texas Health Science Center, Houston, Oct. 8, 2010.

**Sherer M**. Assessment and Management of Confusion; Self-Awareness; The National TBI Model Systems Research Program; Prediction of Outcome After TBI; Symptoms of TBI That Are of Concern to Persons with TBI and Family Members. Presentations made at the Genesis Rehabilitation Conference on Brain Injury, Davenport, Iowa, Oct. 16, 2010.

**Sherer M**. Update on the TBI Model Systems Research Program. Presented to the TIRR medical staff and residents, Houston, Oct. 18, 2010.

**Staats Z**. Promoting Function through Manual Wheelchair Seating and Mobility. Presented at the Texas Occupational Therapy Association's Mountain Central Annual Conference, Sugar Land, Texas, Oct. 2010.

**Struchen MA**, **Davis LC**, **Clark AN**, **Mazzei D**, **Bogaards J**, **Sander AM**. Design and Implementation of a Social Peer Mentoring Program for Persons with Traumatic Brain Injury. Presented at the American Congress of Rehabilitation Medicine Annual Meeting, Montreal, Oct. 21-24, 2010.

**Thomas H**. How Inpatient Length of Stay Impacts Spiritual and Emotional Wellness. Poster presented at the 4th National Spinal Cord Injury Conference, Niagara Falls, Ontario, Oct. 29-30, 2010.

**Thomas L**, **Thayer B**. A Nurse-Initiated Program for Post-Discharge Telephone Contact. Poster presented at the Association of Rehabilitation Nurses Conference, Orlando, Fla., Sept. 29-Oct. 3, 2010.

**Tilton S**, **Gettleman M**. Adolescent Rehabilitation: Collaboration among Speech-Language Pathologists from the Hospital to Home. Presented at the American Speech-Language-Hearing Association Convention, Philadelphia, Nov. 18-20, 2010.

**Tully P**, **Gomez G**. Wheelchair Satisfaction: Collaboration for a Successful Outcome. Presented at the Texas Occupational Therapy Association's Mountain Central Annual Conference, Sugar Land, Texas, October 2010.

**Tully P**, **Lantz E**. Wheelchair Seating and Mobility: Addressing Various Diagnostic Groups. Presented at the Texas Occupational Therapy Association's Mountain Central Annual Conference, Sugar Land, Texas, October 2010.

**Wenzel L**. Orthostatic Hypotension and Quality of Life Outcomes after Locomotor Training in Incomplete Spinal Cord Injury (co-author). Presented at the Christopher and Dana Reed Foundation Symposium, Chandler, Ariz., Dec. 10, 2010.

**Wiggins L**. Stress, Health and Coping After Illness or Trauma. Presented at the Texas Occupational Therapy Association's Mountain Central Annual Conference, Sugar Land, Texas, October 2010.

Yablon S, **Sherer M**, Nakase-Richardson R, Nick T. Amantadine Hydrochloride for Treatment of Symptoms of the Posttraumatic Confusional State: A Randomized, Double-blind, Placebo-controlled Trial. Presented to the meeting of the American Congress of Rehabilitation Medicine, Montreal, Oct. 22, 2010. ♦



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## M MESSAGE FROM THE CMO

One of the reasons I came to Houston as a postdoctoral fellow in 1994 was



*Gerard E. Francisco, M.D., CMO*

the virtually unlimited opportunity for research, both at TIRR Memorial Hermann and across the Texas Medical Center. I've never forgotten that one of the two Rs in TIRR stands for research.

TIRR's reputation is based in part on its long tradition of clinical research in rehabilitation medicine.

For me, it's exciting to be a part of the resurgence of interest in this area.

The renewed energy surrounding research has led us to build new bridges and strengthen existing relationships with other institutions, including Rice University and the University of Houston. Our collaboration with the department of Physical Medicine and Rehabilitation at The University of Texas Health Science Center at Houston (UTHealth) Medical School has led to the development of TIRR's Motor Recovery Laboratory, which will help patients regain lost skills through robotics and neuromodulation.

The research we do is not just for

the sake of discovery. Our ultimate goal is to help people regain motion following injury to the brain and spine. The new science we apply daily is moving us toward better outcomes and encouraging our patients to set even higher goals for themselves.

*Gerard E. Francisco, M.D.  
Chief Medical Officer  
TIRR Memorial Hermann  
Chair, Department of Physical Medicine and Rehabilitation  
The University of Texas Health Science Center at Houston (UTHealth) Medical School*

### About TIRR Memorial Hermann

TIRR Memorial Hermann is a 119-bed nonprofit rehabilitation hospital located in the Texas Medical Center in Houston. Founded in 1959, TIRR has been named one of "America's Best Hospitals" by *U.S. News & World*

*Report* for 21 consecutive years. TIRR provides rehabilitation services for individuals with spinal cord injuries, brain injuries, strokes, amputations and neuromuscular disorders.

TIRR is one of 11 hospitals in the not-for-profit Memorial Hermann system. An integrated healthcare

system, Memorial Hermann is known for world-class clinical expertise, patient-centered care, leading-edge technology and innovation. The system, with its exceptional medical staff and 20,000 employees, serves southeast Texas and the greater Houston community.