CHAIR’S MESSAGE

Dear Friends,

Lots of exciting news items to report since our last newsletter. Our department is celebrating its 10-year anniversary! Hooray! We now have two NIDRR Model Systems: one in Spinal Cord Injury (SCI) and one in Traumatic Brain Injury (TBI). Congratulations to Dr. Doug Johnson-Greene, PI, and to Dr. Elizabeth Felix, co-PI of our new TBI Model System. We have come a long way since the department began in 2002. Our department has continued to grow in research, education, and in our clinical activities.

We now have 18 PM&R residents in our 3-year program, and 2 SCI Medicine fellows, and an additional fellow doing an advanced year of research. We continue to teach the University of Miami (UM) medical students about what we do as well as observers from other nations. As of this year, one of our faculty, Robert Irwin, MD, associate professor has become Assistant Dean for Student Affairs and Vice-Chair for Education for our department. He is leading the charge in the second year medical student course on Problem-Based Learning, the Musculoskeletal/Rheumatology block, and is teaching in the new UM MD-MPH program.

In addition, we have been moving along with our SCI Model Systems grant including two modules, one with University of Michigan in the lead and one with Craig Hospital in the lead as well as our site-specific research project on acute and chronic shoulder pain in which Dr. Irwin plays a key role. We are starting a new multi-center Collaborative SCI Model System project led by the University of Pittsburgh’s Dr. Michael Boninger on wheelchair mobility and wheelchair maintenance and our site-PI is Kevin Dalal, MD, assistant professor and Associate Program Director along with co-PI Rachel Cowan PhD, research assistant professor at the Miami Project.

A major new research clinical trial is beginning at the Miami Project, the Schwann Cell Transplantation Clinical Trial, which will involve our department too. After years of basic science research and animal studies, the Schwann Cell research team has received FDA approval to study the outcomes of cell transplantation of autologous Schwann cells in humans. I am excited to be a part of this team that will include our rehabilitation services as part of this important new project.

We have two new faculty who have just joined our department (more details featured in this newsletter). Shaun Corbett, MD, is developing our Cancer Rehab program and is a former Chief Resident of our program. Gemayaret Alvarez, MD, is our new Neurorehabilitation Medical Director at Jackson Memorial Rehabilitation Hospital. She completed her Brain Injury fellowship at Carolinas Medical Center. I am so happy they have joined our department!

Last but not least, I would like to bring to your attention our on-going effort to assist in establishing a model Comprehensive Rehabilitation Center at Justinien University Hospital, Cap-Haitien, Haiti. Our support is critical to train rehab professionals, build a suitable infrastructure and improve the existing limited care and services. We are committed to this important contribution to the rebuilding of the Haitian healthcare system. Your support will be important for this endeavor.

Thanks for taking time to look at our newsletter.

Best regards and be sure to check our new SCI web site: www.scimiami.med.miami.edu

Diana D. Cardenas, MD, MHA  
Professor and Chair
A research team in the Miller School’s Department of Rehabilitation Medicine has been awarded a federal Traumatic Brain Injury Model Systems (TBIMS) grant for more than $2 million over the next five years. The grant was funded by the National Institute on Disability and Rehabilitation Research (NIDRR), Department of Education. The primary goal for the program is to enhance rehabilitation services and research aimed at meeting the special needs of individuals with traumatic brain injury along the clinical continuum from emergency services through rehabilitation and community re-entry.

The Miller School is among 16 sites nationally that were awarded the prestigious TBIMS grant through a highly competitive selection process. Doug Johnson-Greene, Ph.D., MPH, ABPP, associate professor and Associate Vice-Chairman of the Department of Rehabilitation Medicine, the grant’s principal investigator. The Co-principal investigator is Elizabeth Felix, Ph.D., who is an assistant professor of Rehabilitation Medicine and a Research Health Scientist at the Miami VA. Also participating on the project are Dept of Rehabilitation Medicine faculty Gemayaret Alvarez, M.D., Medical Director of Inpatient Brain Injury Rehabilitation at Jackson Memorial hospital and David Kushner, M.D., Director of Brain Injury Rehabilitation at HealthSouth Rehabilitation Hospital of Miami.

The grant will fund the newly established South Florida Traumatic Brain Injury Model System (SF-TBIMS) program. The proposed activities of the SF-TBIMS reflect an active partnership between the University of Miami Health System, Jackson Memorial Hospital, HealthSouth Rehabilitation Hospital of Miami; and between UM and community organizations, such as the Brain Injury Association of Florida, The Florida Department of Health Brain and Spinal Cord Injury Program, and the WellFlorida Council.

Under the program, grantees will work locally on UM-specific projects and on a separate collaborative project with colleagues from other TBIMS sites across the country. Shirin Shafazand, M.D., an associate professor of Medicine in the Division of Pulmonary, Critical Care and Sleep Medicine, will lead the primary SF-TBIMS research project titled “Evaluation and Intervention of Sleep Disordered Breathing (SDB) In Persons with Traumatic Brain Injury.” The research will examine the impact of sleep disordered breathing on cognitive functioning and recovery, mood, and quality of life and improvement of following use of a device to improve airflow during sleep. Dr. Felix will lead a pilot project to validate methods for objective measurement of pain in persons with cognitive impairments.

Cancer Rehabilitation

By: Shaun C. Corbett, MD

With the number of new cancer diagnoses increasing each year, cancer continues to be a major cause of morbidity and mortality in the United States. In the past, many individuals lost the battle to cancer typically within a few months or years of diagnosis. As our ability to screen for and detect cancer at earlier stages improves, and as our treatments continue to improve, patients are often living many years beyond the date of their initial diagnosis. According to the American Cancer Society, there are more than 13.7 million cancer survivors living in the U.S today. While survivorship is of utmost importance, many patients continue to deal with toxic effects of chemotherapeutic agents and radiation exposure for years after treatment concludes. And while many specialists focus on treatment and surveillance of cancer survivors, quality of life concerns are often forgotten.

The field of Cancer Rehabilitation was created to treat patients suffering from the secondary conditions that often arise either from the cancer itself, or from the treatments administered. Simply put, Cancer Rehabilitation can be described as the field focused on restoring quality of life and function to cancer patients.
Chronic pain is one of the most common secondary complications of spinal cord injury (SCI), occurring in approximately 70% of those with SCI. The presence of chronic pain can significantly interfere with daily activities, sleep, mood, and many other functions. Treating pain in persons with SCI is sometimes difficult because different types of pain may occur in the same individual at the same time, and each type of pain may have a different cause. One particularly troublesome type of pain in individuals with SCI occurs below the level of injury, in the area where they have disrupted sensory and motor function. This type of pain is referred to as neuropathic pain, meaning its primary cause is due to the damage of a nerve – in the case of SCI, damage to the nerves that make up the spinal cord. This type of pain is often described as burning, tingling, numb, and like “pins and needles,” and is usually on both sides of the body and often throughout the entire area that is below the level of injury. Neuropathic pain in SCI can be very hard to treat, and it is not currently known why some people develop this type of pain after SCI and others do not.

Dr. Elizabeth Felix, an Assistant Professor in the Department of Rehabilitation Medicine, and a Research Health Scientist at the Miami VA, has been working on the problem of neuropathic pain in SCI for the past eight years. She uses quantitative sensory testing (QST) techniques to try to understand differences in pain system functioning between those individuals with SCI and neuropathic pain and those individuals with SCI who do not have neuropathic pain. QST includes a number of non-invasive methods for measuring how sensory nerves react to changes in temperature, pain, touch, and vibration, among other sensations. Usually, the QST results measured in a person with chronic pain and SCI are compared to results from uninjured or pain-free individuals, or from an unaffected body site in the person with pain (for example: test results measured below the level of injury in a person with SCI could be compared to results measured above the level of injury, where there should be normal sensory function.)

One of Dr. Felix’s current studies, which is a pilot project funded by the Rehabilitation Research & Development Service of the Veterans Health Administration, includes the use of QST to measure how different temperatures are perceived when they are presented to the area of skin that is at the level of injury in people with SCI. In the area at the level of the SCI, function of the skin senses (touch, temperature, pain) is still within normal limits, but it is thought that at least part of the reason for developing neuropathic pain after SCI may be due to subtle sensory abnormalities in this area. Dr. Felix is testing whether people with SCI and neuropathic pain have greater disruption of normal temperature and pain function in this area than people with SCI who do not have neuropathic pain. By measuring sensory thresholds (“the smallest level or strength of a stimulus that can be detected”) for temperature, pain, and other sensations, she will be able to gain a better understanding of what specific types of damage to the spinal cord may be responsible for the development of chronic neuropathic pain after SCI in some people, but not in others. Although this is a small study that is not yet complete, Dr. Felix’s preliminary results suggest that some sensory processes that are normally present to help control our sensitivity to painful temperatures are disrupted in subjects with SCI who have neuropathic pain, but not in those who don’t have neuropathic pain. Confirmation of these results will help us better understand the possible causes of neuropathic pain after SCI, which can lead to more effective prevention and treatment for it.
**New Faculty Spotlight**

**Gemayaret Alvarez, MD,** completed her Physical Medicine and Rehabilitation residency at Kingsbrook Jewish Medical Center and a brain injury fellowship at Carolinas Rehabilitation Medical Center in North Carolina. Dr. Alvarez joins the department as an assistant professor and is the Medical Director of Neurorehabilitation at Jackson Memorial Hospital. Her clinical interests are acquired brain injury rehabilitation management, neuropharmacology, Botox injections and baclofen pumps for spasticity management. She also treats a wide range of brain disorders including traumatic brain injury and stroke. Her research interest includes neuropharmacology in the brain injury population. She is the lead physiatrist for the South Florida TBI Model System, funded by DoE/NIDRR.

**Shaun Corbett, MD,** received his medical degree from the Medical College of Wisconsin and completed his residency in Physical Medicine and Rehabilitation at Jackson Memorial Hospital/University of Miami. He spent time during his residency working with cancer rehabilitation specialists Dr. Michael Stubblefield and Dr. Christian Custodio at Memorial Sloan Kettering Cancer Institute in New York. Dr. Corbett’s clinical focus aims at providing complete rehabilitative care for cancer patients in all stages of treatment. His clinical expertise includes the treatment of non-operative musculoskeletal conditions associated with cancer and its treatment including; peripheral neuropathies, fatigue syndromes, acute and chronic pain conditions, lymphedema, muscular spasticity and migraines. His research interest includes the use of ultrasound for a variety of musculoskeletal conditions as well as the effects of exercise in the cancer population. His clinics are primarily at the Sylvester Comprehensive Cancer Center.

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**Education and Training: Welcome New Class and Fellows**

**SCI Medicine Fellows**

From left: Eduardo Ballestas, MD, Sharmatie Lal, MD

**2012 PGY-2 PM&R Residents**

Back row from left: Peter Michael, MD, Anthony Esposito, DO, Oghenewoogaga Ophori, MD; front row from left: Deep Garg, MD, Lina Hurtado, MD, Peter Navarro, MD
ARE YOU BOTHERED BY SHOULDER PAIN?

The South Florida Spinal Cord Injury Model System has a clinical shoulder study that may be of benefit to you. If you have paraplegia caused by a spinal cord injury at least 1 year ago and have chronic undiagnosed shoulder pain and use a manual wheelchair, you may be eligible to enroll in this 16 week study. For more information contact Barbara Lutz, RN at 305-448-8057 or blutz@med.miami.edu (you will be compensated for your participation).

ARE YOU MISSING?

If you sustained a spinal cord injury (SCI) between the years 2000 and 2006 and you received inpatient rehabilitation at Jackson Memorial Hospital in Miami, FL, we may be looking for you. We are trying to contact persons who enrolled in the South Florida Spinal Cord Injury Model System study at the time of their injury for a 5 or 10 year follow-up. Even if you are unsure if you enrolled but were injured during this time, please contact Marisa Fiat at 305-243-3575 or mfiat@med.miami.edu or Jorge Mejia-Galvis at 305-243-3575 or jmejia-galvis@med.miami.edu. We're waiting to hear from you.

The Department of Rehabilitation Medicine at the University of Miami Miller School of Medicine, is dedicated to providing quality rehabilitation, research, education, and clinical healthcare. Your donation today will help us reach our goals. To make a gift, please contact Jennifer Mullen Ray, assistant director of development, at (305) 243-9387 or jmullen@med.miami.edu. You can also make a secure, online donation at https://Giving.Med.Miami.edu/Rehab

If you do not wish to receive further fundraising communications from the University of Miami Medical Programs/UHealth System, please send your request either by email to the following address: medoptout@med.miami.edu or mail your request to the Office of HIPAA Privacy and Security, P.O. Box 019132 (M-879), Miami, Florida 33101. Be sure to include the following: Name, Address, Phone Number and Email address. Only complete requests can be processed. You may receive additional communication during the processing of your request.