Currently, there are a total of 115 beds for acute inpatient rehabilitation and extensive outpatient therapy services throughout the Health System. To meet a growing need, in 2014 we opened a 25-bed subacute rehabilitation unit for orthopaedic patients at Jewish Home Life in New York City, where a Mount Sinai physiatrist oversees all rehabilitation services.

Notable achievements for 2014 include:
- Research funding of $4,107,243 at The Mount Sinai Hospital and more than $2 million at the James J. Peters Veterans Affairs Medical Center;
- Training programs that include a highly competitive residency program (21 positions), sports medicine fellowship (2 positions), spinal cord injury medicine fellowship (1 position), psychology internship (6 positions), and psychology postdoctoral training programs (4 positions).

We expect continued excellence as we further integrate our clinical programs and expand our research capabilities.

**Clinical and Neuropathological Sequelae of Brain Injury in Nonathletes**

Researchers at Icahn School of Medicine at Mount Sinai are leading a multi-site, four-year $6 million study to determine the long-term clinical and neuropathological sequelae of single and repeated head injuries in nonathletes. Wayne Gordon, PhD, Director of the Brain Injury Research Center of Mount Sinai (BIRC-MS), Jack Nash Professor, and Vice Chair of the Department of Rehabilitation Medicine, is principal investigator of the study. Collaborating sites include the University of Washington, Group Health Research Institute, Oregon Health Sciences University, the Martinos Center for Biomedical Imaging at Harvard/Massachusetts General Hospital, and the Uniformed Services University of the Health Sciences.

The research is multidisciplinary in its approach and includes participants from neuropsychology, neuropathology, neuroradiology, geriatrics, neurology, biostatistics, and epidemiology. It will also leverage extensive resources from the ongoing, population-based prospective cohort study, Adult Changes in Thought (ACT), based at the University of Washington and Group Health Research Institute. The study includes medical, behavioral, and genetic characterization of a cohort—of whom 20 percent have a history of mild-moderate traumatic brain injury (TBI)—and a neuropathology workup upon death. An additional cohort of individuals with TBI will come from BIRC-MS.

The goal is to advance the understanding of chronic traumatic encephalopathy (CTE) and other late effects of TBI in nonathletes. Researchers aim to uncover an in-vivo biomarker for the early diagnosis of CTE. Consequently, all study participants will undergo a uniform neurobehavioral assessment, chosen to maximize correspondence with existing large-scale TBI and dementia studies; an MRI scan; and genomic analysis. Post-mortem examinations will seek to relate neuropathological findings to data collected while the person was alive.

The study is funded by the Foundation for the National Institutes of Health, the National Institute of Neurological Disorders and Stroke, and the Eunice Kennedy Shriver National Institute of Child Health and Human Development.
National Recognition for Advancing Spinal Cord Injury Research and Treatment

William A. Bauman, MD, and Ann M. Spungen, EdD, were presented with the 2014 Samuel J. Heyman Service to America Medal in Science and the Environment for their groundbreaking contributions to improving the health care and quality of life of paralyzed veterans. Dr. Bauman is Director, and Dr. Spungen, Associate Director, of the National Center of Excellence for the Medical Consequences of Spinal Cord Injury at the Mount Sinai-affiliated James J. Peters VA Medical Center in the Bronx, New York.

Dr. Bauman is also Professor of Medicine, and Rehabilitation Medicine, at Icahn School of Medicine at Mount Sinai. Dr. Spungen is Associate Professor of Medicine, and Rehabilitation Medicine. The Award is bestowed annually by the Partnership for Public Service, a nonprofit nonpartisan organization that celebrates excellence in the federal civil service.

In national testimonials, their work was described as revolutionary, creative, and having a profound impact on how physicians now care for these patients.

The team’s many accomplishments include: studies revealing that patients have an increased risk for heart disease, and are susceptible to an asthma-like lung condition; novel drug therapies for low blood pressure and poor bowel function; investigating new ways to reduce bone loss that occurs after the immobilization of spinal cord injury; and advancing the understanding and treatment of chronic, nonhealing pressure ulcers. They were also among the first to test and reveal the benefits of using the ReWalk™ exoskeleton.

Examining the Clinical Benefits of Robotic Exoskeletons

Two robotic exoskeletons with powered leg attachments that enable individuals with spinal cord injury to stand upright, walk, and return to sitting, are being used by patients at The Mount Sinai Hospital’s Department of Rehabilitation Medicine, one of the first departments in the nation to examine the benefits of the use of these devices.

The two devices being used at Mount Sinai—the ReWalk™ and the Ekso™—have external frames that adjust to a patient’s legs. Motors then power movement at the hips and knees, and a battery-powered computer coordinates that movement into a walking pattern. Patients, who must have use of their arms, press a device worn like a wristwatch in order to stand upright, walk, and return to sitting.

Allan J. Kozlowski, PhD, Assistant Professor, Rehabilitation Medicine, is overseeing this initiative through the Department’s Bionics Research Program, which has provided more than 550 walking sessions with 37 research participants through 2014. In addition to enjoying the experience of walking, participants have reported secondary changes that include reduced pain and muscle spasticity, and improved bowel and bladder function, and sleep. Research is ongoing at The Mount Sinai Hospital and the Mount Sinai-affiliated James J. Peters VA Medical Center in the Bronx, New York, to evaluate these and other new robotic devices.

Lifetime Achievement Award

For Kristjan T. Ragnarsson, MD

Mount Sinai’s Kristjan T. Ragnarsson, MD, has received the 2014 Frank H. Krusen, MD, Lifetime Achievement Award from the American Academy of Physical Medicine and Rehabilitation, its highest award. Dr. Ragnarsson was recognized for his outstanding contributions to patient care, research, education, community service, and involvement in Academy activities.

Dr. Ragnarsson has served as the Chair of Mount Sinai’s Department of Rehabilitation Medicine since 1986, and has been responsible for the growth of its clinical and academic programs. Dr. Ragnarsson has testified before Congress, presented to federal commissions, and met with leaders of federal agencies to advocate for patients on behalf of physical medicine and rehabilitation organizations where he has served in multiple leadership positions.

Appointment

Malcolm D. Reid, MD, MPP, Chairman of the Department of Rehabilitation Medicine at Mount Sinai St. Luke’s and Mount Sinai Roosevelt, and Vice President of the Medical Society of the State of New York, has been nominated to serve as President-Elect of the Medical Society. Dr. Reid, also Assistant Professor, Rehabilitation Medicine, Icahn School of Medicine at Mount Sinai, is a distinguished physician dedicated to advancing medical education. He has been affiliated with the Medical Society for more than 26 years, where he has held numerous positions, including Chair of its Resident Physicians section, and continues to serve on the New York delegation to the American Medical Association.