Message From The Director

Since it was founded, Moss Rehabilitation Research Institute (MRRI) has been at the forefront of research on rehabilitation and translational neuroscience. Today, MRRI is well known as an international leader in the field of rehabilitation science.

Daily work at MRRI includes innovative theory-driven research, clinical, and educational programs. This creates a vibrant buzz of activity from participants, administrators, and scientific staff. Our staff members are deeply passionate about their work. We are pleased to see that the influence of MRRI extends far beyond the walls of our outstanding facility. For example, we develop clinical research standards that help other clinicians and scientists, receive more NIH grant funding than any other department in the Einstein Healthcare Network, collaborate with scientists all over the world, and train post-doctoral fellows to become great researchers.

MRRI’s rigorous, focused, and creative research equips us to address the pressing challenge of improving outcomes and reducing disability after stroke, traumatic brain injury, and other neurological conditions. Our talented group of scientists is fortunate to work with a superb team of clinicians at MossRehab, a leading U.S. rehabilitation hospital. As incoming Director of MRRI, I am delighted to build on the strong foundation and momentum of the Institute, to enhance existing activities, and introduce new initiatives that advance our mission to facilitate the translation of theory-driven research into clinical treatments in neurorehabilitation.

I’m looking forward to what we can accomplish together.

Dylan J. Edwards, PhD

Dr. John Whyte Reflects on his Tenure as Director

Over 25 years ago, Dr. Myrna Schwartz (former Associate Director) and I founded MRRI. At the time, we noticed that a lot of rehabilitation research was not theory-driven. The questions researchers were asking were of the sort, “Let’s see if this works.” At best, that gives you one more thing that works. It doesn’t launch a science. At the same time, successful theoretically important work was being done in neurologically normal people, not studying any patients that might complicate the theory. That didn’t seem like a good way to solve the problem. Our vision for MRRI has been to apply theory and make sure that we are addressing questions that will impact real people in real ways. It’s a complicated problem, but a fascinating mission to guide 25 years of work.
Cognitive Neuroscience and Cognitive Rehabilitation

Aphasia is a disorder of language due to brain injury, most commonly from stroke. A person with aphasia experiences problems producing and, in severe cases, understanding written and spoken language. Critically, intelligence remains largely intact, but because communication is impaired, aphasia often leads to disability and social isolation.

A major barrier to effective communication in aphasia is ‘naming impairment.’ Naming impairment is a prominent feature of aphasia that presents as frequent difficulty retrieving and producing familiar words, even names for common, everyday things such as ‘library’ or ‘subway.’ Erica Middleton, PhD, Director of the Language and Learning Laboratory, has been studying naming impairment in aphasia for a decade.

Dr. Middleton was awarded a five-year, $2.4 million grant from the National Institutes of Health to support her work in applying human learning principles to the treatment of naming impairment in aphasia.

“The ultimate goal is to understand how naming impairment manifests for an individual with aphasia, so that if someone presents to the clinic, we can diagnose which underlying processes are damaged, and select a treatment that specifically targets the damaged processes.”

To learn more about Dr. Middleton’s work in the area of Cognitive Neuroscience and Cognitive Rehabilitation, visit our website, mrri.org.
Public radio station WHYY recently took an in-depth look into aphasia. They featured interviews with experts from MossRehab’s Aphasia Center and members of its “Conversation Cafes.”

Aphasia Center Director Sharon Antonucci, PhD, shared her thoughts on the radio show The Pulse.

“While there are no guarantees about where you will end up in your recovery, opportunities for rehabilitation and for improving and increasing communication skills are lifelong,” Dr. Antonucci said.

She emphasized that recovery from aphasia can continue for years after a stroke.

The MossRehab Aphasia Center was developed to meet the long-term communication and psychosocial needs of people affected by aphasia. It is a place where they can find information and peer support as well as participate in on-going research and treatment.

To listen to a recording of the interview, visit mrri.org/radio-report-features-mossrehabsaphasia-center/. For more information, watch our video about the MossRehab Aphasia Center on our MossResearch YouTube channel.

**Traumatic Brain Injury Treatments and Outcomes**

MossRehab’s Drucker Brain Injury Unit and MRRI recently received their renewal grant for the fifth time from the National Institute on Disability, Independent Living and Rehabilitation Research (NIDILRR) to continue as a Traumatic Brain Injury (TBI) Model System.

The highly competitive grant and classification as a Model System is earned for excellence in both the treatment and the research related to a particular disability. Specifically, a TBI Model System must demonstrate a strong track record of excellent clinical care and treatment. It must carry out a program of research on outcome prediction and treatment, and it must have a superior record of publications, presentations, and other knowledge sharing and teaching on TBI rehabilitation.

Receiving the grant renewal for the fifth straight cycle means the MossRehab TBI Model System has been continuously funded since 1997. This makes our renowned facility one of only two to hold the designation continuously for 25 years.

“I am tremendously proud and gratified to be leading a fifth TBI Model System for MossRehab and Moss Rehabilitation Research Institute,” said Tessa Hart, PhD, who recently retired from her role as Director of the TBI Model System.

Read more about the TBI Model System renewal grant on our blog at mrri.org.
2018 Accomplishment Highlights

5 Awards and Honors

39 Conference Presentations

9 Grants Funded

58 Research Papers

Dr. John Whyte was honored as the Dudley Allen Sargent Lecturer and gave an invited talk at Sargent College in Boston, MA titled “Translating Translational Research to Rehabilitation: What Are Our Treatments and Who Are We Treating?”.

Moss researchers including Dr. Tessa Hart, Dr. John Whyte, Andrew Packel, and Dr. Mary Ferraro, in collaboration with colleagues at other institutions, finalized the Manual for Rehabilitation Treatment Specification and published four interrelated articles on this topic in the journal Archives of Physical Medicine & Rehabilitation.

Drs. Aaron Wong and Amanda Rabinowitz each received Albert Einstein Society Awards. Dr. Wong’s award will support research on pathways subserving the imitation of actions, and Dr. Rabinowitz’s award will fund the development of a “chat bot” to augment outpatient brain injury rehabilitation.

Dr. Laurel Buxbaum, Associate Director of MRRI, was recently honored with two prestigious awards - The Arthur Benton Mid-Career Award of the International Neuropsychological Society and the Kenneth Viste Award of the American Society for Neurorehabilitation.

Dr. Erica Middleton was honored with the 2018 J. Stanley Cohen Award for Research Excellence from the Einstein Healthcare Network. She was also interviewed by Dr. Bill Latimer for the public radio show “Public Health Minute” about her research on aphasia.

Dr. Tessa Hart will be presented with the prestigious Robert L. Moody Prize for Distinguished Initiatives in Brain Injury Research and Rehabilitation during the 19th Annual Galveston Brain Injury Conference on May 2nd & 3rd, 2019 in Galveston, Texas. This award recognizes distinguished contributions in brain injury rehabilitation and research.

Dr. Dylan Edwards, Director of the institute, is a co-author on a upcoming publication in the journal Cortex titled “Using tDCS to facilitate motor learning in speech production: The role of timing.”

Moss Rehabilitation Research Institute (MRRI) was awarded a 5-year renewal of its NIH-funded training grant titled “Postdoctoral Training in Translational Neurorehabilitation Research”. The grant is directed by John Whyte, MD, PhD, co-founder and former Director of MRRI.

Our Research Registry

MRRI maintains a registry with information on over 2,000 research volunteers. These volunteers include adults who have a neurological condition such as a stroke or traumatic brain injury, as well as adults who do not have a neurological condition.

The MRRI Registry helps support neurorehabilitation research in the MossRehab community. We thank all of our research volunteers and their families. Your participation is vital to the discovery of state-of-the-art, evidence-based neurorehabilitation treatments at MossRehab.

To learn more, please visit our MRRI Research Registry web page or contact the Research Registry Office at 215-663-7147.