Promoting plasticity and recovery following spinal cord injury

Karim Fouad studied Biology in Germany where he also performed his Graduate studies on motor control of invertebrates. During his time as PDF in Edmonton, with Dr. Pearson he switched to locomotor control in vertebrates, which triggered his interest in neuroplasticity. He expanded his research in the area of injury induced neuroplasticity in the groups of Drs. Schwab and Dietz in Zürich, Switzerland, especially in relation to spinal cord injuries. In 2001 he started his group at the University of Alberta in Edmonton, where he is now a Professor and Canada Research Chair in the Department of Physical Therapy, in the Faculty of Rehabilitation Medicine.

Karim Fouad’s research focuses on repair of the injured spinal cord. This includes combined treatment approaches to regenerate lost connections but also to rewire spared circuitry. He uses rehabilitative training to study, and enhance mechanisms of neuroplasticity, but also as a tool to promote functional recovery when plasticity is pharmacologically enhanced. Over the last years he developed a more compressive view on plasticity exploring a wide range of changes that occur after spinal injuries, ranging from spasticity, to blood flow and mental health.