

Keynote Speakers

Brian Kwon



Brian Kwon is a Professor in the Department of Orthopaedics at the University of British Columbia, the Canada Research Chair in Spinal Cord Injury, and holds the Dvorak Chair in Spine Trauma. He is an attending spine surgeon at Vancouver General Hospital, a level 1 trauma center and regional referral center for spinal cord injuries (SCI). He is also a research scientist at the [International Collaboration on Repair Discoveries \(ICORD\)](#) and the Chair of the SCI Cure Committee for the Rick Hansen Institute.

His primary clinical and scientific research focus is in spine trauma and spinal cord injury (SCI). As a surgeon-scientist, he is particularly interested in the bi-directional process of translational research for spinal cord injury. He has worked extensively on establishing biomarkers

of human SCI to understand the biology of human injury and to better stratify injury severity and improve the prediction of neurologic outcome.

Brian Kwon has led the development of a novel large animal model of SCI and is utilizing this for both bench-to-bedside and bedside-back-to-bench translational studies. He has also led initiatives to establish a framework for how promising therapies for SCI should be evaluated in the laboratory setting prior to translation into human patients.

Keynote Abstracts



Translational perspectives from the acutely injured spinal cord

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In this presentation, a framework for translational research in acute spinal cord injury will be described that focuses on our incomplete understanding of human pathophysiology. This will include a discussion of optimizing hemodynamic management in acute SCI, in which efforts to improve spinal cord perfusion pressure will be reviewed. These efforts to optimize the hemodynamic management has led to the development of novel biosensing of oxygenation within the injured cord and an ambitious multi-national effort to incorporate electrical epidural stimulation into the early blood pressure management of acute SCI. We will describe initiatives to better understand the heterogeneity of cord injuries through the characterization of molecular responses and the establishment of biomarkers. And we will describe how these efforts have been leveraged into a resource that will support global efforts in understanding the biology of human injury.