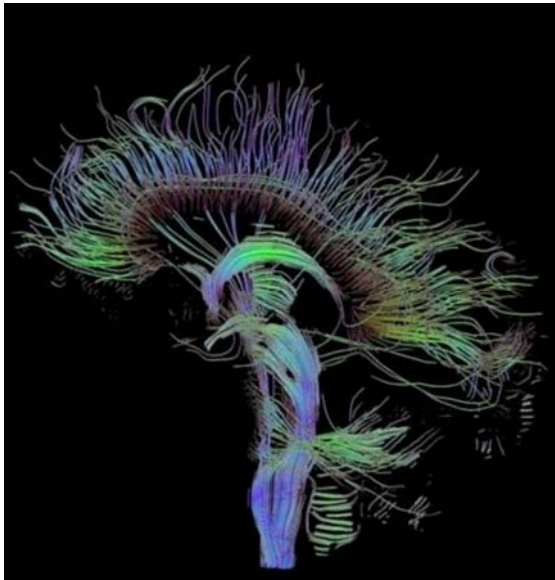


Magnetic Resonance Imaging of brain reorganisation in children after stroke or traumatic brain injury undergoing rehabilitation



Background: Rehabilitation in children and adolescents with acquired brain injury, such as after stroke or traumatic brain injury, is challenging. Differences in lesion site, the severity and extent of the lesion, the age and cognitive and motor development of the child at time of the lesion, the severity of damage of specific cognitive and sensori-motor functions and many other factors account for the large heterogeneity between patients. These factors, combined with specific treatment, spontaneous neurological recovery and the effects of multi-disciplinary rehabilitation interventions are all assumed to contribute to the observed functional improvements. The significance of each factor, however, remains unclear and remains topic of ongoing investigations.

Goal

- To determine brain reorganization during rehabilitation after a brain injury and how this reorganization correlates with neurological, motor and cognitive changes.
- To identify markers in brain structures and brain activation patterns that could serve as predictors of outcome following acute treatment and rehabilitation therapy in children with stroke or traumatic brain injury.

Project onset

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