

LOC Symposium: Myelin Water Imaging in Human Brain: Principles, Validation and Applications

Organizers:

OHBM 2017 Local Organizing Committee

White matter makes up 40% of brain tissue. Myelin is a critical structural and functional component of white matter that allows rapid and effective information exchange in the brain. Recent animal work shows that myelin is neuroplastic. Using a rodent model, McKenzie et al. (2014) established the relationship between oligodendrocyte proliferation and learning, showing accelerated oligodendrocyte generation is associated with performance of a complex skill and an absence of motor learning when these cells were genetically blocked. However, much less is known about what changes in myelin are associated with learning or following brain damage in humans. Recently non-invasive imaging techniques have emerged that can characterize myelin *in vivo* in humans. This symposium will provide suggestions for the implementation of myelin water imaging to index myelin in humans in future work

Symposia Schedule:

10:50-11:07

Overview of myelin water imaging

Alex MacKay, PhD, University of British Columbia, Vancouver, Canada

11:07-11:25

Histopathological validation of MWF as an index of myelin

Corree Laule, PhD, University of British Columbia, Vancouver, Canada

11:25-11:42

Evidence of Continued Myelination into the Middle Age of Healthy Adults from Myelin Water Imaging

Jeffrey A. Stanley, PhD, Wayne State University, Detroit, MI, United States

11:42-12:00

Myelin water imaging to index behaviour in healthy and clinical populations

Lara Boyd, PT, PhD, University of British Columbia, Vancouver, Canada