

Supplementary Table 1. Correlations between *ex vivo* diffusion values and histology markers of white matter injury stratified for the frontal and posterior white matter tract.

	FA		MD	
Histopathology marker	ATR	ILF	ATR	ILF
Tissue rarefaction LFB&H (1.25x)	$\beta=-0.46 \pm 0.18$ p=0.015	$\beta=-0.22 \pm 0.11$ p=0.050	$\beta=0.15 \pm 0.14$ n.s.	$\beta=0.36 \pm 0.17$ p=0.048
Myelin density MBP (40x)	$\beta=0.31 \pm 0.16$ n.s.	$\beta=0.51 \pm 0.13$ p=0.001	$\beta=-0.29 \pm 0.11$ p=0.015	$\beta=-0.80 \pm 0.21^a$ p=0.001
Axonal density NF200 (40x)	$\beta=0.17 \pm 0.21$ n.s.	$\beta=0.35 \pm 0.09$ p<0.001	-	-
Myelination fraction MBP / NF200 (40x)	$\beta=0.26 \pm 0.18$ n.s.	$\beta=0.12 \pm 0.15$ n.s.	$\beta=-0.32 \pm 0.13$ p=0.018	$\beta=-0.58 \pm 0.22$ p=0.014

Adjusted standardized regression coefficients \pm SE across ROIs of the Anterior Thalamic Radiation (ATR, n=33) and the Inferior Longitudinal Fasciculus (ILF, n=33), see also Fig. 1. Stratified analyses were performed for correlations that were significant in Table 3. Relatively low FA and high MD indicate abnormal diffusion.

LFB&H: luxol fast blue & hematoxylin; MBP: myelin basic protein; NF200: neurofilament 200; myelination fraction: MBP/NF200; FA=fractional anisotropy; MD=mean diffusivity.

^a Histopathology marker x tract interaction effect $p<0.05$.