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#### Research question and background

Most predilection site of MS lesions, including those in the subpial grey matter and periventricular regions, are found in close vicinity to the cerebrospinal fluid (CSF). Based on these observations we speculate that cytotoxic mediators present in the CSF contribute to tissue damage and subsequent neurodegeneration

#### Methods and tissues used

Based on neuropathological reports we have selected 6 CSF samples from patients with extensive grey matter pathology and abundant (chronic) active lesions upon autopsy and 6 CSF samples from patients with very few demyelinated lesions. We exposed primary neuronal cells to CSF and subsequently analyzed cell viability.

#### Results and conclusion

Unfortunately, we did not find any significant differences in neuronal cell viability when we treated neuronal cells with CSF from patients with abundant grey and white matter pathology compared to cells treated with CSF from patients with a relative mild pathology. This suggests that there is no difference in the neurotoxic potential of CSF from patients with profound CNS pathology compared to patients with marginal CNS pathology.