**Appendix e-1**

All serum samples tested for PNS antibodies were MOG antibody seropositive using a live cell based assay analyzed by flow cytometry which has high specificity and sensitivity (as described in Dale et al Neurol Neuroimm Neuroinflamm 20141, Ramanathan et al Neurol Neuroimm Neuroinflamm 20142, Ramanathan et al JNNP 20183, and Tea et al Acta Neuropath Comm 20194).

The assay used by our study group for MOG antibody detection provides a quantitative value with delta mean fluorescence intensity (MFI) which we have identified as a validated proxy for titers in extensive testing of 139 children and 148 adults with MOGAD (Tea et al, Acta Neuropath Comm 20194). The delta MFI value of the MOGAD PNS cohort, and the 10 MOG patients without PNS involvement all demonstrate these patients had delta MFIs above the determined threshold (mean delta MFI + 3SD from a cohort of healthy and other neurological disease controls). In the patients in whom we had access to serial samples, there was variation in the evolution of the titre and delta MFI values over time as we have previously described4, and this may be explained within the context of clinical disease activity and treatment.

**References**

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3. Ramanathan S, Mohammad S, Tantsis E, et al. Clinical course, therapeutic responses and outcomes in relapsing MOG antibody-associated demyelination. *J Neurol Neurosurg Psychiatry* 2018; 89: 127-137.

4. Tea F, Lopez JA, Ramanathan S, et al. Characterization of the human myelin oligodendrocyte glycoprotein antibody response in demyelination. *Acta Neuropathol Commun* 2019; 7: 145.

**A close up of a map

Description automatically generated**

**Appendix e-1 Figure 1. MOG antibody serostatus in patients** (A) The 19 MOGAD PNS patients and 10 MOGAD patients without PNS involvement all demonstrated a delta MFI value over the positive threshold (dotted line) for MOG antibody detection. Representative experiment of three shown. (B) Serial samples demonstrate the evolution of MOG antibody delta MFI values over the course of clinical disease activity in six patients. All patients remained above the positive threshold (dotted line) for MOG antibody seropositivity, although their delta MFI fluctuated over time.

CNS central nervous system; E episode; MFI mean fluorescence intensity; PNS peripheral nervous system