

Lipid biochemical changes detected in normal appearing white matter of chronic multiple sclerosis by spectral coherent Raman imaging

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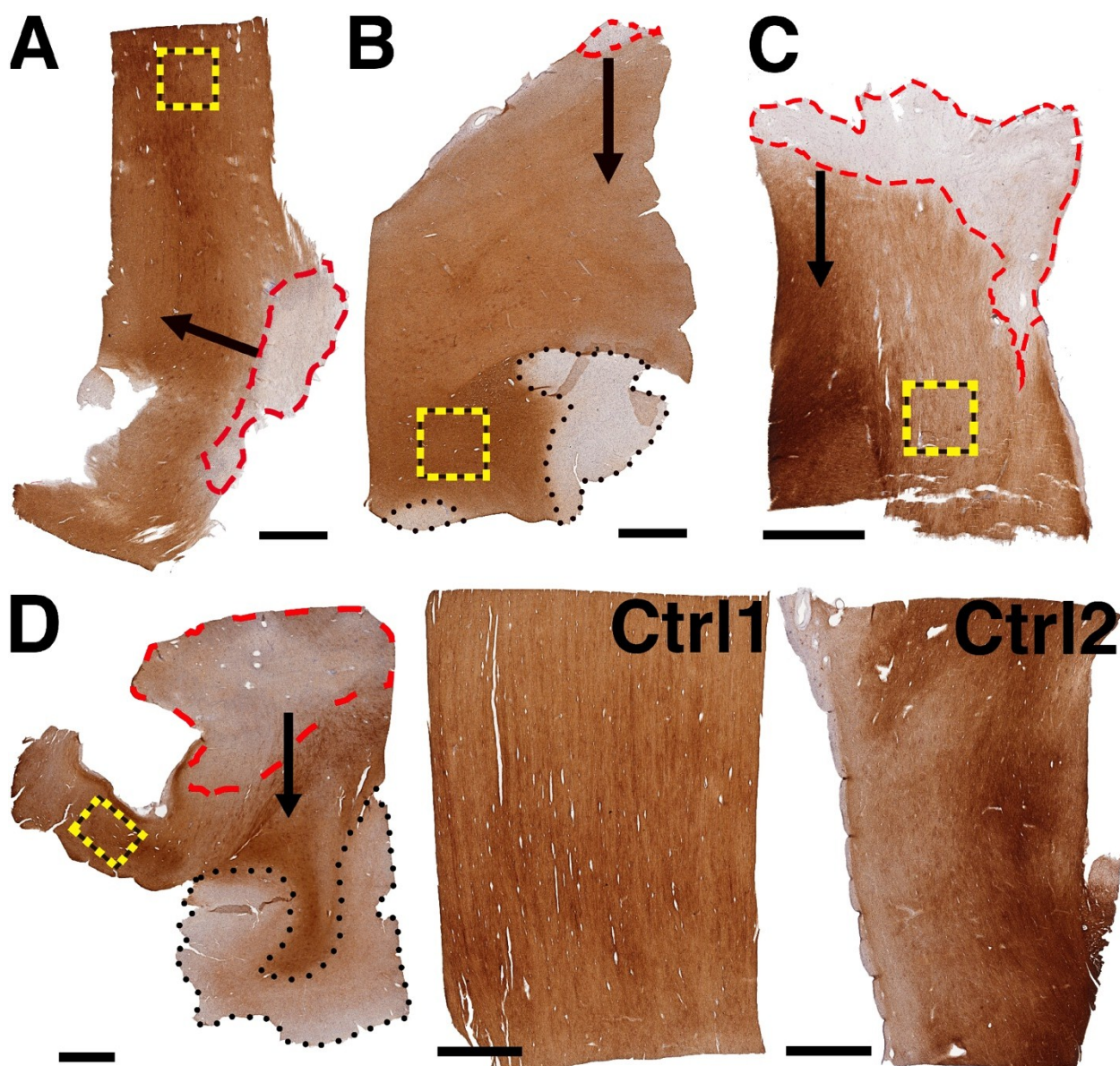


Figure S1. Immunohistochemical overview of MS samples (A-D) along with region matched non-neurological control samples (CTRL1, CTRL2). Sections were stained for proteolipid protein and counterstained with haematoxylin. Red dashed areas indicate chronic white matter lesions and black dotted areas show normal appearing grey matter. Black arrows indicate approximate direction of sampling for sCARS spectral images and yellow dashed rectangles are regions chosen for obtaining 'normal appearing white matter' data. Black scale bars = 2 mm

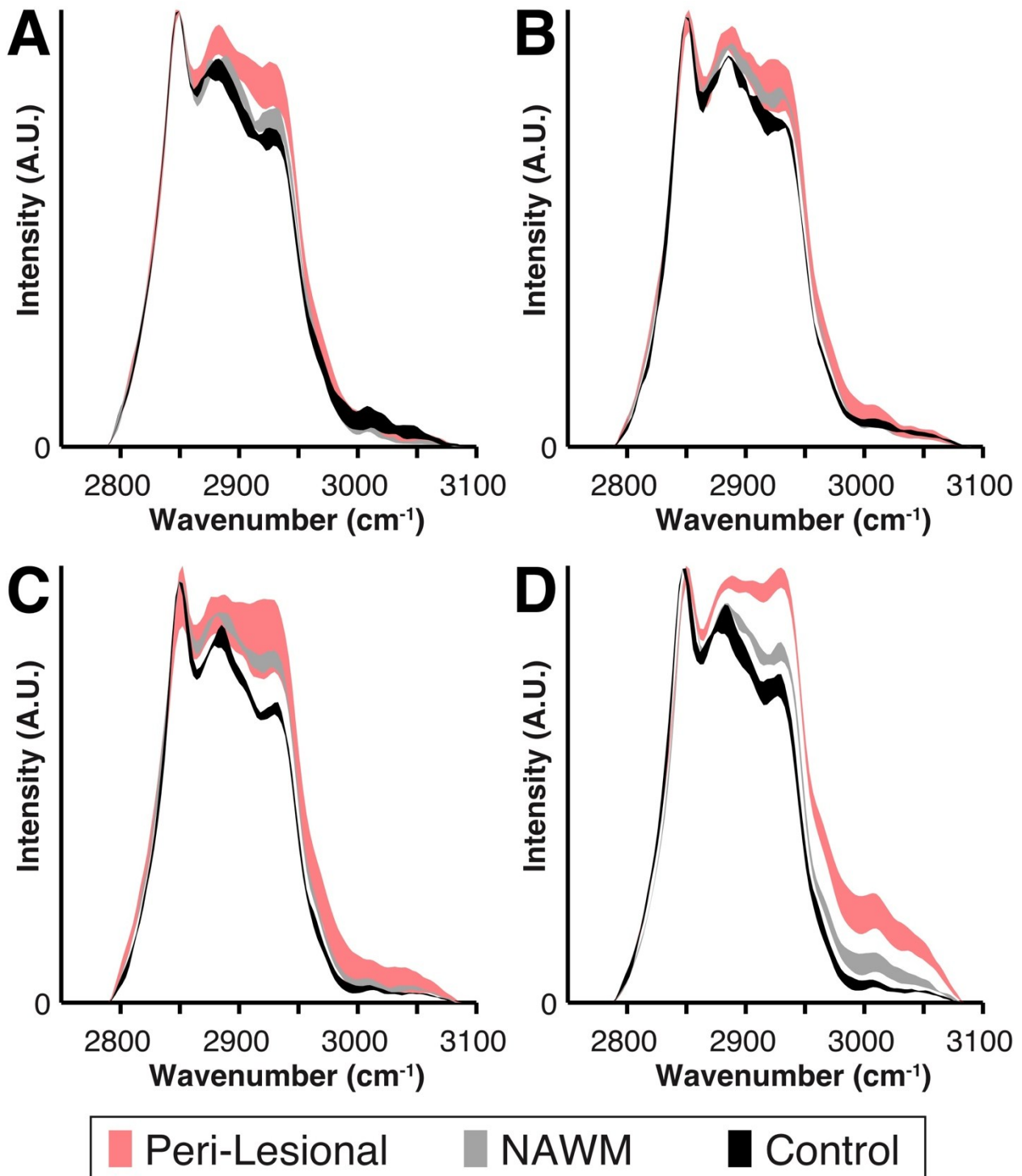


Figure S2. Overlay of sCARS spectra from MS samples A – D showing the distribution in normalised peak intensities and shapes in peri-lesional areas adjacent to lesions (red), those obtained from areas on the same section displaying no overt demyelination/gliosis, designated as ‘normal appearing’ white matter (grey) and those taken from region-matched healthy control samples (black). Spectra have been smoothed (binomial filter), normalised and baseline removed using a cubic spline fit.

Electronic Supplementary Information (ESI)

Table S1. Description of patient samples. (SPMS = secondary progressive multiple sclerosis)

Sample	Region	Gender	MS type	Age (years)	Post mortem delay (h:min)	Cause of Death
A	Corpus Callosum	male	SPMS	78	8:45	cachexia & pneumonia
B	Corpus Callosum	male	SPMS	80	9:45	not known
C	Corpus Callosum	female	SPMS	66	10:45	euthanasia
D	Corpus Callosum	female	SPMS	54	9:45	metastatic carcinoma
Ctrl1	Corpus Callosum	female	Control	76	8	Bronchopneumonia
Ctrl2	Corpus Callosum	female	Control	76	24	pneumonia