

Table S1. Cytokine profiles of study participants (descriptive statistics)

Variable	COVID-19 myelitis (<i>n</i> = 11), <i>Median [Q1; Q3]</i>	Multiple sclerosis (<i>n</i> = 37), <i>Median [Q1; Q3]</i>	Healthy controls (<i>n</i> = 7), <i>Median [Q1; Q3]</i>
APRIL	91473.14 [68544.40; 116750.80]	72710.82 [60673.70; 92278.70]	50194.29 [34260.45; 57872.34]
BAFF	5191.14 [3901.23; 6710.36]	3978.93 [3395.24; 4973.32]	3728.67 [3438.00; 4152.54]
sCD30	269.10 [174.86; 442.88]	375.72 [252.94; 453.50]	621.75 [513.57; 663.51]
sCD163	8199.70 [7701.02; 15311.36]	10778.88 [8890.52; 13145.40]	7041.45 [3256.56; 7976.46]
Chitinase 3-like 1	21393.56 [17569.90; 38111.48]	26466.30 [22305.74; 41493.44]	13544.70 [9163.11; 18857.94]
gp130 sIL-6Rb	53715.16 [41.52; 73149.82]	50281.30 [34437.00; 87761.04]	89.01 [83.13; 89.01]
IFN-a2	0.90 [0.90; 42.03]	72.28 [0.90; 72.28]	59.61 [55.17; 68.55]
IFN-b	0.42 [0.42; 4.04]	4.04 [3.64; 4.44]	48.93 [43.62; 58.23]
IFN-y**	63.40 [0.66; 165.68]	63.40 [63.40; 63.40]	115.38 [105.51; 125.16]
IL-2**	0.39 [0.39; 0.39]	0.39 [0.39; 0.39]	50.40 [46.92; 53.85]
IL-6Ra	789.94 [1.80; 1213.60]	1008.44 [789.94; 1478.80]	60.96 [55.83; 71.13]
IL-8	20.54 [15.86; 31.42]	31.42 [24.54; 37.34]	67.74 [59.10; 70.56]
IL-10	8.90 [1.20; 13.12]	12.80 [9.56; 16.58]	25.47 [23.16; 26.61]
IL-11	2.22 [0.17; 2.70]	1.72 [0.17; 2.46]	12.69 [12.69; 13.38]

IL-12(p40)**	0.94 [0.94; 0.94]	0.94 [0.94; 0.94]	114.45 [100.98; 118.95]
IL-12(p70)**	0.28 [0.28; 0.28]	0.28 [0.28; 0.28]	15.51 [12.96; 16.14]
IL-19	95.90 [76.22; 114.58]	76.22 [55.00; 86.22]	375.69 [349.59; 401.55]
IL-20**	0.62 [0.62; 0.62]	0.62 [0.62; 0.62]	35.13 [31.35; 37.05]
IL-22**	2.95 [2.95; 2.95]	2.95 [2.95; 2.95]	250.32 [223.86; 273.00]
IL-26	728.18 [503.06; 861.72]	861.72 [657.16; 1046.46]	10348.38 [9438.33; 13499.88]
IL-27 (p28)**	6.38 [6.38; 6.38]	25.70 [6.38; 25.70]	649.14 [579.93; 683.70]
IL-28A IFN- λ 2**	0.55 [0.55; 0.55]	0.55 [0.55; 0.55]	70.50 [67.23; 70.50]
IL-29 IFN- λ 1**	2.62 [2.62; 2.62]	2.62 [2.62; 16.32]	248.10 [224.04; 280.32]
IL-32	75.90 [49.50; 132.64]	75.90 [52.42; 111.62]	632.34 [566.61; 697.47]
IL-34**	25.04 [25.04; 25.04]	25.04 [25.04; 25.04]	1312.65 [1166.88; 1349.01]
IL-35**	2.84 [2.84; 2.84]	2.84 [2.84; 2.84]	428.10 [386.64; 480.09]
LIGHT**	0.68 [0.68; 0.68]	0.68 [0.68; 0.68]	59.22 [53.94; 61.86]
MMP-1**	5.26 [5.26; 5.26]	5.26 [5.26; 5.26]	180.96 [147.48; 180.96]
MMP-2	3653.40 [3233.86; 34702.90]	3392.18 [2804.46; 4267.44]	14505.66 [11255.25; 16427.46]
MMP-3	31.30 [31.30; 55.08]	55.08 [55.08; 55.08]	2802.75 [2662.95; 2937.99]
Osteocalcin	863.90 [830.34; 1044.18]	892.85 [761.54; 1131.98]	2221.47 [1465.32; 2753.13]
Osteopontin	301476.00 [56733.44; 301476.00]	301476.00 [152444.22; 301476.00]	26696.70 [19877.45; 32763.45]

Pentraxin-3	101.88 [8.29; 129.32]	108.75 [8.29; 142.98]	681.24 [635.79; 1196.49]
sTNF-R1	1289.24 [1154.22; 1711.08]	1184.69 [958.62; 1531.58]	904.50 [772.71; 1240.53]
sTNF-R2	133.10 [119.94; 166.08]	129.86 [117.24; 146.92]	656.91 [629.97; 797.07]
TSLP	3.26 [0.22; 3.84]	3.84 [2.68; 4.94]	30.39 [26.19; 32.49]
TWEAK	514.48 [247.02; 625.32]	526.99 [412.02; 613.94]	899.40 [567.24; 996.39]

** Results should be interpreted with caution, because in many participants the level of cytokine was out of definition range.

Table S2. Cytokine profiles of study participants (inferential statistics)

Variable	Comparison between three groups, <i>P</i> -value	Post hoc pairwise comparisons		
		COVID-19 myelitis vs. Multiple sclerosis, <i>P_{adj}</i> -value	COVID-19 myelitis vs. Healthy controls, <i>P_{adj}</i> -value	Multiple sclerosis vs. Healthy controls, <i>P_{adj}</i> -value
APRIL	0.011	0.714	0.023	0.099
BAFF	0.088	NA*	NA	NA
sCD30	0.006	1.000	0.007	0.014
sCD163	0.009	0.355	0.534	0.012
Chitinase 3-like 1	< 0.001	0.582	0.055	< 0.001
gp130 sIL-6Rb	< 0.001	0.625	0.047	< 0.001
IFN-a2	0.038	0.050	0.306	1.000
IFN-b	< 0.001	0.077	< 0.001	< 0.001
IFN-y**	< 0.001	1.000	0.001	< 0.001
IL-2**	< 0.001	1.000	< 0.001	< 0.001
IL-6Ra	< 0.001	0.342	0.074	< 0.001
IL-8	< 0.001	0.416	< 0.001	0.002
IL-10	< 0.001	0.037	< 0.001	< 0.001

IL-11	< 0.001	1.000	0.003	< 0.001
IL-12(p40)**	< 0.001	1.000	< 0.001	< 0.001
IL-12(p70)**	< 0.001	1.000	< 0.001	< 0.001
IL-19	< 0.001	0.099	0.052	< 0.001
IL-20**	< 0.001	1.000	< 0.001	< 0.001
IL-22**	< 0.001	0.637	< 0.001	< 0.001
IL-26	< 0.001	0.783	< 0.001	< 0.001
IL-27 (p28)**	< 0.001	0.525	< 0.001	< 0.001
IL-28A IFN- λ 2**	< 0.001	1.000	< 0.001	< 0.001
IL-29 IFN- λ 1**	< 0.001	1.000	< 0.001	< 0.001
IL-32	< 0.001	1.000	< 0.001	< 0.001
IL-34**	< 0.001	0.637	< 0.001	< 0.001
IL-35**	< 0.001	1.000	< 0.001	< 0.001
LIGHT**	< 0.001	1.000	< 0.001	< 0.001
MMP-1**	< 0.001	1.000	< 0.001	< 0.001
MMP-2	< 0.001	0.446	0.061	< 0.001
MMP-3	< 0.001	0.682	< 0.001	< 0.001
Osteocalcin	0.001	1.000	0.016	< 0.001

Osteopontin	< 0.001	0.524	0.012	< 0.001
Pentraxin-3	< 0.001	1.000	< 0.001	< 0.001
sTNF-R1	0.081	NA	NA	NA
sTNF-R2	< 0.001	1.000	0.003	< 0.001
TSLP	< 0.001	0.080	< 0.001	< 0.001
TWEAK	0.032	1.000	0.042	0.048

Note: Statistically significant results are marked with a gray background.

NA—post hoc comparisons are not available (due to the absence of significant differences between the three groups).

* This cytokine is of interest to researchers and the *P*-value for comparison between three groups was close to the threshold, so an additional comparison of two groups (COVID-19 myelitis vs Multiple sclerosis) was carried out using a Student's *t*-test. The significance level was **0,013**.

** Results should be interpreted with caution because in many participants the level of cytokine was out of the definition range.