



Supplement

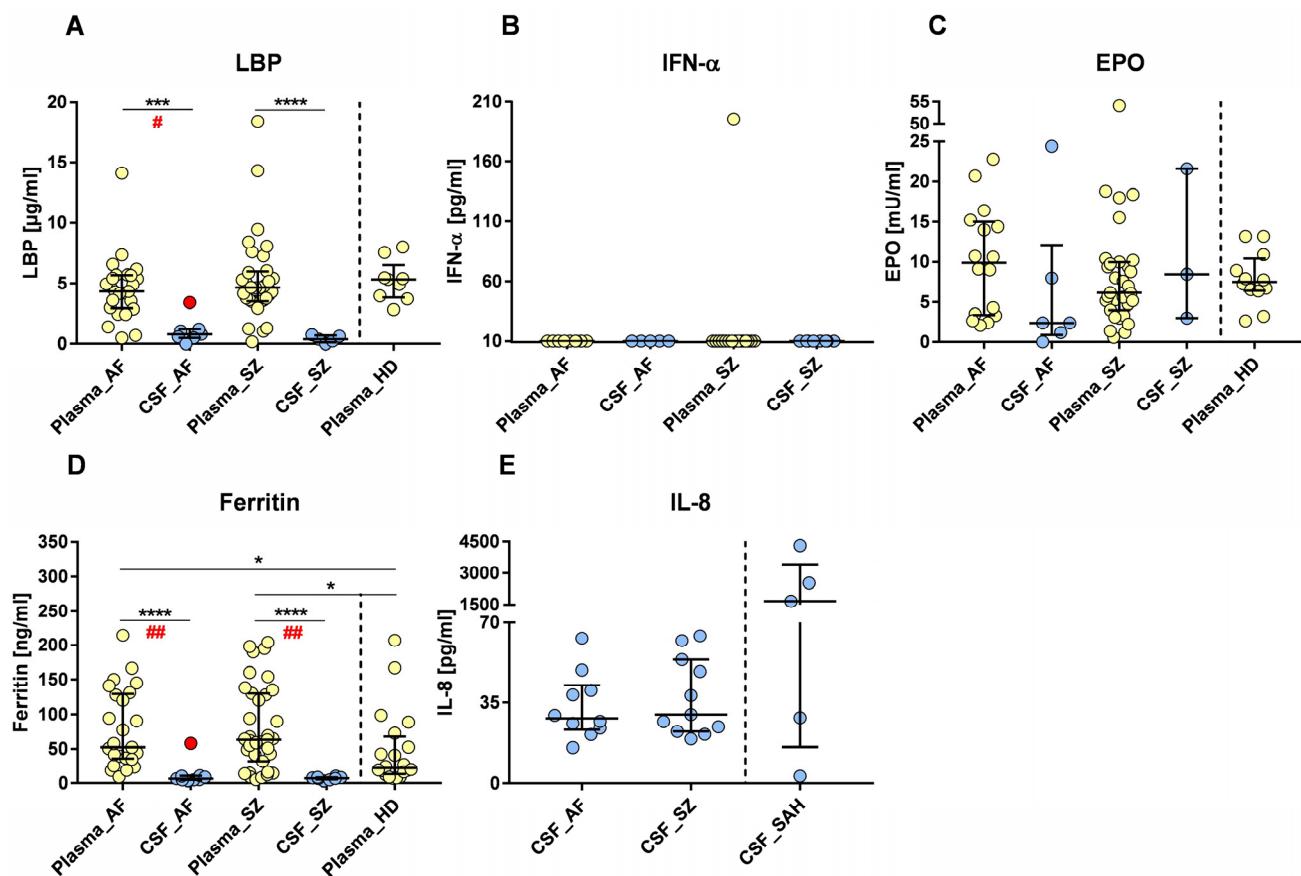


Figure S1: Biomarker concentrations in plasma and CSF of patients with AF, SZ, SAH, and HDs. Concentrations of LBP (A), IFN- α (B), EPO (C), ferritin (D), and IL-8 (E, CSF only) are shown as scatter plots, with bars indicating the medians, including interquartile ranges. A selected outlier patient in the CSF_AF group is color labeled (red symbol) in A and D. Wilcoxon rank-sum test was performed to analyze differences among groups, with significant differences being marked by * $p \leq 0.05$, ** $p \leq 0.001$, and *** $p \leq 0.0001$. Wilcoxon matched pairs signed-rank test was performed to analyze differences between patient-matched pairs (plasma vs. CSF), with significant differences being marked by # $p \leq 0.05$, ## $p \leq 0.01$.

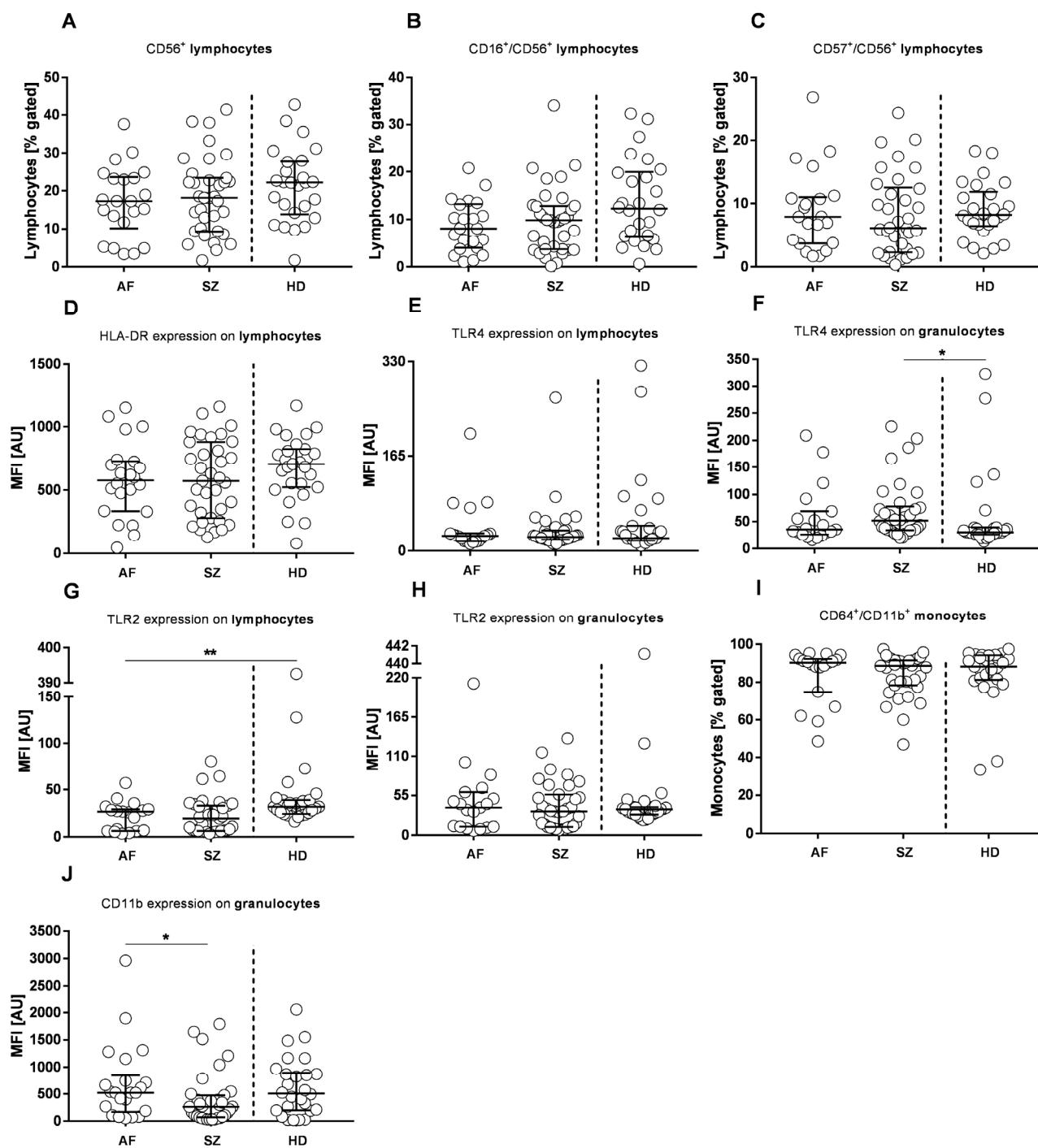


Figure S2: Flow cytometric profiles in patients with AF, SZ, and HDs. Relative amounts (% gated) of CD56⁺ lymphocytes (A), CD16⁺/CD56⁺ lymphocytes (B), CD57⁺/CD56⁺ lymphocytes (C) and CD64⁺/CD11b⁺ monocytes (I) are shown. Lymphocyte expression densities of HLA-DR (D), TLR4 (E) and TLR2 (G) are shown. Granulocyte expression densities of TLR4 (F), TLR2 (H) and CD11b (J) are shown. Expression densities are given as arbitrary units (AU). Bars indicate the respective medians, including interquartile ranges. Wilcoxon rank-sum test was performed to analyze differences among groups, with significant differences being marked by * $p \leq 0.05$, and ** $p \leq 0.01$.

Table S1: Correlation values for selected plasma cytokine concentrations in patients with affective (AF) and schizophrenic (SZ) spectrum disorders, and healthy donors (HDs). r indicates the spearman correlation coefficient. Statistically significant p values ($p \leq 0.05$) are highlighted. Notable is the strong plasma level correlation between IL-1 β and TNF- α in HDs, which also represents the highest correlating pair of cytokines in SZ patients, but shows a much weaker correlation in the AF patients. Other significantly correlating pairs of plasma cytokine levels in the SZ group are IL-8 vs. TNF- α , IL-8 vs. IL-1 β , IL-8 vs. IL-10, and IL-1 β vs. IL-10, all of them showing both, lower and not significant, correlations in AF patients. In the latter, the highest correlation is found between IL-10 vs. TNF- α , however not being different in the SZ group, and a trendwise negative correlation in HDs ($p=0.78$).

	AF			SZ			HDs		
	Size	r	P value	Size	r	P value	Size	r	P value
TNF- α vs. sCD25	23	-0.07	0.74	34	0.08	0.66	19	-0.36	0.13
IL-8 vs. sCD25	25	-0.17	0.40	34	-0.09	0.63	17	0.11	0.67
IL-6 vs. sCD25	23	0.22	0.32	29	-0.16	0.42	17	0.37	0.14
IL-1 β vs. sCD25	26	-0.30	0.14	34	0.21	0.22	15	-0.09	0.75
IL-10 vs. sCD25	25	0.08	0.71	35	-0.08	0.63	18	-0.06	0.80
IL-8 vs. TNF- α	22	-0.32	0.15	34	0.49	≤ 0.01	17	0.37	0.14
IL-6 vs. TNF- α	20	0.12	0.61	30	0.22	0.25	17	-0.12	0.64
IL-1 β vs. TNF- α	23	0.06	0.77	34	0.62	≤ 0.0001	17	0.75	≤ 0.001
IL-10 vs. TNF- α	22	0.53	≤ 0.05	35	0.48	≤ 0.01	20	-0.07	0.78
IL-6 vs. IL-8	23	-0.23	0.28	30	-0.04	0.83	15	0.04	0.89
IL-1 β vs. IL-8	25	-0.03	0.90	37	0.39	≤ 0.05	13	0.36	0.23
IL-10 vs. IL-8	25	-0.20	0.34	35	0.43	≤ 0.01	16	-0.02	0.94
IL-1 β vs. IL-6	23	0.26	0.23	30	0.32	0.08	15	-0.13	0.64
IL-10 vs. IL-6	23	-0.11	0.63	30	-0.04	0.82	16	0.42	0.10
IL-10 vs. IL-1 β	25	-0.27	0.19	35	0.43	≤ 0.01	16	-0.36	0.17
EPO vs. LBP	15	0.21	0.45	27	0.09	0.66	9	0.28	0.46
EPO vs. Ferritin	16	0.05	0.86	31	-0.22	0.23	12	-0.60	≤ 0.05
EPO vs. sCD25	16	0.25	0.36	31	-0.05	0.78	12	-0.13	0.69
EPO vs. TNF- α	15	0.25	0.38	31	0.35	0.05	12	-0.25	0.42
EPO vs. IL-8	16	-0.04	0.90	31	0.21	0.25	12	0.19	0.56

EPO vs. IL-6	16	-0.03	0.91	27	0.25	0.20	12	-0.51	0.10
EPO vs. IL-1β	16	-0.13	0.63	31	0.25	0.18	12	0.11	0.74
EPO vs. IL-10	16	0.54	≤0.05	31	0.34	0.06	12	0.22	0.50
LBP vs. Ferritin	24	0.17	0.43	31	-0.18	0.32	9	-0.25	0.52
LBP vs. sCD25	25	0.02	0.91	31	0.35	0.06	9	-0.12	0.78
LBP vs. TNF-α	22	-0.53	0.01	31	0.15	0.42	9	0.45	0.23
LBP vs. IL-8	24	0.04	0.85	31	0.24	0.20	9	-0.25	0.52
LBP vs. IL-6	22	0.07	0.77	29	-0.12	0.54	9	-0.46	0.21
LBP vs. IL-1β	25	0.05	0.81	31	-0.08	0.69	9	0.62	0.09
LBP vs. IL-10	24	-0.46	≤0.05	32	0.10	0.58	9	-0.52	0.16
Ferritin vs. sCD25	25	0.19	0.34	34	0.21	0.23	20	0.11	0.63
Ferritin vs. TNF-α	22	0.00	0.99	34	-0.26	0.13	16	0.13	0.63
Ferritin vs. IL-8	24	-0.22	0.30	34	-0.22	0.21	16	-0.31	0.24
Ferritin vs. IL-6	22	0.15	0.51	29	-0.40	0.03	16	0.05	0.86
Ferritin vs. IL-1β	25	-0.02	0.92	34	-0.22	0.22	20	0.04	0.86
Ferritin vs. IL-10	24	0.23	0.29	35	-0.09	0.62	18	0.07	0.79

Table S2: Correlation analysis of selected CSF cytokine concentrations in AF, SZ, and SAH. *r* indicates the spearman correlation coefficient. Statistically significant p values ($p \leq 0.05$) are highlighted. In contrast to plasma, CSF cytokines show more often negative correlations, such as most of the correlations involving S100B. Interestingly, positive correlations with S100B are restricted to IL-1β, IL-6, and IL-8, exclusively in AF patients (and SAH patients regarding IL-8). A strong negative correlation between IL-10 and IL-8 occurred in AF patients, with a similar trend in SZ patients. SAH patient-derived CSF was restricted to analysis regarding S100B and IL-8.

	AF			SZ			SAH		
	Size	r	P value	Size	r	P value	Size	r	P value
TNF-α vs. sCD25	6	-0.29	0.58	5	0.3	0.68	n. d.	n. d.	n. d.
IL-8 vs. sCD25	6	0.12	0.84	5	0.5	0.45	n. d.	n. d.	n. d.
IL-6 vs. sCD25	6	-0.15	0.83	4	0	1.08	n. d.	n. d.	n. d.
IL-1β vs. sCD25	7	-0.41	0.36	5	-0.1	0.95	n. d.	n. d.	n. d.

IL-10 vs. sCD25	7	-0.07	0.89	5	0.1	0.95	n. d.	n. d.	n. d.
S100B vs. sCD25	4	-0.32	0.67	5	-0.72	0.17	n. d.	n. d.	n. d.
IL-8 vs. TNF-α	7	-0.68	0.11	8	-0.62	0.11	n. d.	n. d.	n. d.
IL-6 vs. TNF-α	5	-0.10	0.95	6	0.49	0.36	n. d.	n. d.	n. d.
IL-1β vs. TNF-α	8	0.79	≤ 0.05	8	0.57	0.15	n. d.	n. d.	n. d.
IL-10 vs. TNF-α	8	0.51	0.20	8	0.55	0.17	n. d.	n. d.	n. d.
S100B vs. TNF-α	4	-1.00	0.08	7	-0.67	0.12	n. d.	n. d.	n. d.
IL-6 vs. IL-8	5	0.30	0.68	6	0.03	1.00	n. d.	n. d.	n. d.
IL-1β vs. IL-8	10	-0.21	0.55	11	-0.14	0.69	n. d.	n. d.	n. d.
IL-10 vs. IL-8	8	-0.90	≤ 0.01	8	-0.38	0.36	n. d.	n. d.	n. d.
S100B vs. IL-8	7	0.64	0.14	9	-0.24	0.54	5	0.50	0.45
IL-1β vs. IL-6	6	0.41	0.43	6	0.71	0.14	n. d.	n. d.	n. d.
IL-10 vs. IL-6	6	-0.14	0.80	6	0.26	0.66	n. d.	n. d.	n. d.
S100B vs. IL-6	3	0.50	1.00	6	-0.03	0.98	n. d.	n. d.	n. d.
IL-10 vs. IL-1β	9	0.48	0.19	8	-0.12	0.79	n. d.	n. d.	n. d.
S100B vs. IL-1β	7	0.25	0.59	9	-0.20	0.61	n. d.	n. d.	n. d.
S100B vs. IL-10	5	-0.70	0.23	7	-0.67	0.12	n. d.	n. d.	n. d.
EPO vs. LBP	6	-0.46	0.39	3	-0.50	1.00	n. d.	n. d.	n. d.
EPO vs. Ferritin	6	0.70	0.14	3	0.50	1.00	n. d.	n. d.	n. d.
EPO vs. sCD25	6	-0.12	0.82	3	0.50	1.00	n. d.	n. d.	n. d.
EPO vs. TNF-α	5	0.90	0.08	3	0.50	1.00	n. d.	n. d.	n. d.
EPO vs. IL-8	6	-0.99	≤ 0.05	3	-1.00	0.33	n. d.	n. d.	n. d.
EPO vs. IL-6	5	-0.46	0.43	-	-	-	n. d.	n. d.	n. d.
EPO vs. IL-1β	6	0.60	0.22	3	-0.50	1.00	n. d.	n. d.	n. d.
EPO vs. IL-10	6	0.99	≤ 0.05	3	1.00	0.33	n. d.	n. d.	n. d.
EPO vs. S100B	5	-0.95	0.17	3	-0.87	0.67	n. d.	n. d.	n. d.
LBP vs. Ferritin	7	0.14	0.78	5	-0.40	0.52	n. d.	n. d.	n. d.

LBP vs. sCD25	7	0.22	0.64	4	0.20	0.92	n. d.	n. d.	n. d.
LBP vs. TNF-α	6	0.03	1.00	5	-0.60	0.35	n. d.	n. d.	n. d.
LBP vs. IL-8	6	0.43	0.42	5	0.80	0.13	n. d.	n. d.	n. d.
LBP vs. IL-6	6	0.14	0.80	4	0.20	0.92	n. d.	n. d.	n. d.
LBP vs. IL-1β	7	0.23	0.61	5	-0.60	0.35	n. d.	n. d.	n. d.
LBP vs. IL-10	7	-0.32	0.50	5	-0.50	0.45	n. d.	n. d.	n. d.
LBP vs. S100B	4	0.40	0.75	5	0.36	0.57	n. d.	n. d.	n. d.
Ferritin vs. sCD25	7	-0.19	0.72	5	0.80	0.13	n. d.	n. d.	n. d.
Ferritin vs. TNF-α	8	0.91	≤ 0.05	8	0.71	0.06	n. d.	n. d.	n. d.
Ferritin vs. IL-8	8	-0.71	0.06	8	-0.29	0.51	n. d.	n. d.	n. d.
Ferritin vs. IL-6	6	0.37	0.50	6	-0.03	1.00	n. d.	n. d.	n. d.
Ferritin vs. IL-1β	9	0.78	≤ 0.05	8	0.50	0.22	n. d.	n. d.	n. d.
Ferritin vs. IL-10	9	0.56	0.12	8	0.12	0.79	n. d.	n. d.	n. d.
Ferritin vs. S100B	5	-0.40	0.52	7	-0.93	≤ 0.01	n. d.	n. d.	n. d.