

Supplementary Table 1. Regression analysis of each serum and CSF analyte across time for each individual (within subjects comparison across time; top) and the means and standard error of the mean for each analyte across the day (bottom).

Analyte	Serum						CSF								
	CRP	IFN γ	IL-6	IL-8	NGAL	TNF	CRP	IFN γ	IL-6	IL-8	NGAL	TNF	α Syn	A β 40	A β 42
HC +	33.3%	0%	66.7%	0%	33.3%	0%	0%	83.3%	83.3%	16.7%	50%	0%	50%	66.7%	66.7%
HC -	33.3%	16.7%	0%	16.7%	16.7%	0%	33.3%	0%	0%	0%	0%	0%	16.7%	0%	0%
HC 0	33.3%	83.3%	33.3%	83.3%	50%	100%	66.7%	16.7%	16.7%	83.3%	50%	100%	33.3%	33.3%	33.3%
PD +	33.3%	0%	41.7%	25%	25%	0%	8.3%	41.7%	33.3%	16.7%	33.3%	0%	75%	66.7%	58.3%
PD -	25%	8.3%	0%	16.7%	8.3%	8.3%	50%	0%	0%	0%	16.7%	8.3%	8.3%	0%	0%
PD 0	41.7%	91.7%	58.3%	58.3%	66.7%	91.7%	41.7%	58.3%	66.7%	83.3%	50%	91.7%	16.7%	33.3%	41.7%

Condition:		Healthy Controls												Parkinson's Disease											
Serum Analyte	Hour:	0	1	2	4	6	10	12	16	20	24	26	0	1	2	4	6	10	12	16	20	24	26		
TNF	Mean	2.73	2.70	2.67	2.71	2.70	2.78	2.71	2.76	2.70	2.84	2.83	1.81	1.74	1.77	1.71	1.79	1.73	1.70	1.85	1.75	1.74	1.78		
	SEM	0.08	0.13	0.10	0.14	0.11	0.10	0.13	0.11	0.04	0.13	0.08	0.18	0.15	0.15	0.14	0.15	0.13	0.13	0.16	0.13	0.16	0.14		
IFN γ	Mean	5.49	5.28	5.03	4.64	4.96	5.28	5.47	5.68	5.39	4.72	4.62	5.25	4.66	4.33	3.90	3.74	3.56	3.62	3.94	3.57	3.25	3.00		
	SEM	0.84	0.95	0.76	0.50	0.62	0.49	0.64	0.98	0.76	0.69	0.73	1.75	1.31	1.20	1.01	0.81	0.53	0.52	0.62	0.51	0.44	0.38		
NGAL	Mean	1.46E+05	1.48E+05	1.47E+05	1.54E+05	1.60E+05	1.66E+05	2.26E+05	1.64E+05	1.64E+05	1.56E+05	1.59E+05	2.09E+05	1.96E+05	2.13E+05	2.05E+05	2.10E+05	2.22E+05	2.15E+05	2.15E+05	1.93E+05	2.06E+05	2.17E+05		
	SEM	1.08E+04	1.06E+04	8.95E+03	7.22E+03	1.07E+04	1.31E+04	6.96E+04	1.71E+04	2.18E+04	1.72E+04	2.29E+04	1.54E+04	1.51E+04	1.55E+04	1.67E+04	1.17E+04	1.90E+04	1.52E+04	1.79E+04	2.26E+04	2.26E+04	1.53E+04		
CRP	Mean	1.56E+06	1.53E+06	1.53E+06	1.50E+06	1.57E+06	1.56E+06	1.46E+06	1.45E+06	1.47E+06	1.52E+06	1.54E+06	1.45E+06	1.36E+06	1.44E+06	1.37E+06	1.38E+06	1.41E+06	1.37E+06	1.40E+06	1.33E+06	1.56E+06	1.73E+06		
	SEM	4.78E+05	4.45E+05	4.47E+05	4.11E+05	4.60E+05	4.55E+05	4.24E+05	4.38E+05	4.47E+05	4.65E+05	4.51E+05	5.43E+05	4.75E+05	5.19E+05	4.93E+05	4.92E+05	4.65E+05	4.39E+05	4.08E+05	3.92E+05	4.25E+05	4.76E+05		
IL-6	Mean	0.75	0.93	1.21	1.10	1.14	1.81	2.80	2.52	2.25	2.33	2.73	0.79	0.95	1.70	1.56	1.57	2.16	3.33	2.74	3.62	4.94	4.30		
	SEM	0.13	0.20	0.20	0.25	0.26	0.32	0.44	1.54	0.80	0.88	1.07	0.09	0.12	0.42	0.28	0.35	0.55	0.74	0.58	0.73	1.67	0.97		
IL-8	Mean	10.57	11.84	12.16	12.17	11.92	12.50	10.78	11.45	11.76	12.86	12.11	11.09	10.43	10.00	9.90	9.78	9.94	9.99	10.24	10.37	10.86	9.89		
	SEM	1.48	1.87	1.96	1.83	1.67	1.55	1.44	1.81	1.62	2.39	2.18	2.34	2.58	2.60	2.56	2.38	2.09	2.49	2.11	2.18	2.29	2.11		
CSF Analyte																									
TNF	Mean	0.34	0.51	0.91	1.00	1.36	1.18	1.04	0.92	0.75	0.68	0.55	0.21	0.63	1.28	1.26	1.11	1.48	0.78	0.87	0.67	0.59	0.47		
	SEM	0.10	0.08	0.18	0.19	0.29	0.17	0.37	0.25	0.17	0.12	0.07	0.03	0.08	0.26	0.24	0.18	0.45	0.14	0.18	0.13	0.09	0.07		
IFN γ	Mean	0.38	0.37	0.30	0.65	0.21	1.58	1.96	1.91	3.12	2.92	2.90	0.21	0.28	0.17	0.11	0.17	0.37	0.40	2.47	3.16	5.21	3.45		
	SEM	0.08	0.09	0.15	0.49	0.12	1.14	1.53	1.22	1.61	1.40	1.28	0.04	0.07	0.05	0.04	0.06	0.20	0.24	2.15	2.74	4.65	2.82		
NGAL	Mean	1.95E+03	1.85E+03	1.92E+03	2.01E+03	1.89E+03	2.20E+03	1.99E+03	2.21E+03	2.38E+03	2.35E+03	2.33E+03	2.12E+03	2.12E+03	2.01E+03	2.00E+03	2.00E+03	2.15E+03	2.05E+03	2.38E+03	2.29E+03	2.35E+03	2.37E+03		
	SEM	65.87	79.83	111.60	186.20	178.99	160.11	193.14	225.51	283.34	307.99	303.94	265.89	331.17	287.94	219.75	179.89	260.08	168.31	291.09	290.43	337.50	276.51		
CRP	Mean	3.78E+03	3.49E+03	3.96E+03	4.51E+03	4.13E+03	4.24E+03	3.93E+03	3.77E+03	3.70E+03	3.54E+03	3.51E+03	3.76E+03	3.90E+03	3.65E+03	3.53E+03	3.32E+03	3.22E+03	3.06E+03	2.95E+03	2.93E+03	3.14E+03	3.59E+03		
	SEM	1.29E+03	1.20E+03	1.46E+03	1.74E+03	1.59E+03	1.53E+03	1.47E+03	1.28E+03	1.21E+03	1.18E+03	1.18E+03	1.28E+03	1.46E+03	1.37E+03	1.37E+03	1.33E+03	1.35E+03	1.29E+03	1.07E+03	1.20E+03	1.36E+03	1.74E+03		
IL-6	Mean	1.83	2.70	4.58	8.91	11.11	16.30	14.20	17.58	19.50	15.75	13.93	1.93	2.24	3.55	10.09	17.74	27.27	15.86	21.00	16.31	12.24	10.14		
	SEM	0.68	1.42	1.75	1.90	1.89	3.37	3.18	3.72	4.49	3.30	2.77	0.28	0.32	0.85	3.46	8.07	16.60	6.33	9.43	7.45	5.01	3.31		
IL-8	Mean	41.61	43.69	115.18	450.78	1517.26	7985.04	2759.34	923.85	579.63	344.84	294.47	38.35	43.05	74.56	298.81	516.52	529.46	376.91	316.62	246.08	159.24	159.24		
	SEM	3.69	4.94	26.41	100.15	973.42	7334.99	2224.01	508.90	240.71	99.96	92.56	3.30	4.40	9.18	57.05	138.52	156.65	116.69	105.43	80.28	32.70	29.68		
α Syn	Mean	1.54E+03	1.60E+03	1.69E+03	2.05E+03	1.94E+03	1.97E+03	2.04E+03	2.15E+03	2.10E+03	2.34E+03	2.31E+03	1.14E+03	1.14E+03	1.23E+03	1.40E+03	1.53E+03	1.69E+03	1.81E+03	1.93E+03	2.00E+03	2.17E+03	2.23E+03		
	SEM	168.02	168.76	178.25	336.96	263.38	234.82	216.65	255.17	231.12	510.44	517.45	118.97	92.45	113.63	130.80	153.88	180.62	216.23	243.78	260.97	296.95	304.77		
A β 40	Mean	5.03E+03	5.27E+03	5.82E+03	6.11E+03	6.29E+03	6.73E+03	6.93E+03	7.49E+03	7.51E+03	7.24E+03	7.11E+03	3.75E+03	4.14E+03	4.22E+03	4.71E+03	4.98E+03	5.57E+03	5.94E+03	6.26E+03	6.51E+03	6.54E+03	6.78E+03		
	SEM	595.87	554.70	541.30	646.01	535.53	619.72	493.56	735.43	744.94	709.58	736.16	316.54	292.70	355.82	359.07	448.29	524.20	575.86	716.46	806.80	847.75	853.09		
A β 42	Mean	1.35E+03	1.42E+03	1.57E+03	1.62E+03	1.64E+03	1.71E+03	1.75E+03	1.91E+03	1.87E+03	1.86E+03	1.79E+03	8.70E+02	1.09E+03	1.10E+03	1.26E+03	1.40E+03	1.50E+03	1.62E+03	1.70E+03	1.76E+03	1.83E+03	1.87E+03		
	SEM	218.91	233.44	236.04	255.02	220.36	220.27	198.21	237.37	175.22	204.57	220.66	77.47	125.32	122.03	152.75	179.92	199.10	220.05	246.99	299.47	320.83	308.10		

The most stable analytes across time in a majority of HC and PD subjects were serum IFN γ , IL-8, & TNF and CSF IL-8, & TNF. Values denote the percentage of individuals per group (HC; n=6, PD; n=12) that display a significantly positive (+), negative (-), or no association (θ ; i.e., were stable) across time. Analytes that are $\geq 51\%$ stable (θ) are in bold (top). All analytes are presented as the mean pg/ml and SEM for healthy control and Parkinson's disease subjects across the day (bottom).