

Table S1 (a). Assay Performance Measures. Calibration standard sample concentrations used and the corresponding mean estimated concentration (pg/ml) based on duplicate measurements for each cytokine.

IL-1a			IL-1b	
Dilution	Conc. (pg/ml)	Estimated Conc.(pg/ml) **	Conc. (pg/ml)	Estimated Conc.(pg/ml)
1:1	6500.00	6590.30	15000.00	14976.22
1:3	2166.67	2147.75	5000.00	5063.16
1:9	722.22	737.18	1666.67	1655.59
1:27	240.74	238.99	555.56	569.90
1:81	80.25	74.37	185.19	175.33
1:243	26.75	17.88	61.73	51.34
1:729	8.92	20.74	20.58	26.94
IL-2			IL-4	
Dilution	Conc. (pg/ml)	Estimated Conc.(pg/ml)	Conc. (pg/ml)	Estimated Conc.(pg/ml)
1:1	2700.00	2742.60	2000.00	2010.02
1:3	900.00	921.40	666.67	674.19
1:9	300.00	300.30	222.22	218.46
1:27	100.00	99.86	74.07	77.40
1:81	33.33	33.66	24.69	24.02
1:243	11.11	10.54	8.23	6.86
1:729	3.70	4.13	2.74	2.06
IL-5			IL-6	
Dilution	Conc. (pg/ml)	Estimated Conc.(pg/ml)	Conc. (pg/ml)	Estimated Conc.(pg/ml)
1:1	1700.00	1716.81	2500.00	2422.94
1:3	566.67	567.52	833.33	835.02
1:9	188.89	189.14	277.78	277.87
1:27	62.96	62.59	92.59	92.36
1:81	20.99	21.45	30.86	31.50
1:243	7.00	7.42	10.29	9.61
1:729	2.33	1.20	3.43	3.27
IL-8			IL-10	
Dilution	Conc. (pg/ml)	Estimated Conc.(pg/ml)	Conc. (pg/ml)	Estimated Conc.(pg/ml)
1:1	1000.00	1014.66	1200.00	1195.97
1:3	333.33	340.79	400.00	402.59
1:9	111.11	108.76	133.33	130.72
1:27	37.04	38.75	44.44	49.55
1:81	12.35	12.03	14.81	8.52
1:243	4.12	3.48	4.94	3.68
1:729	1.37	1.21	1.65	3.42

** Average of 2 duplicate samples.

Table S1 (b). Assay Performance Measures (cont'd). Calibration standard sample concentrations used and the corresponding mean estimated concentration (pg/ml) based on duplicate measurements for each cytokine (cont'd).

IL-12			IL-13	
Dilution	Conc. (pg/ml)	Estimated Conc.(pg/ml) **	Conc. (pg/ml)	Estimated Conc.(pg/ml)
1:1	5000.00	5135.38	2500.00	2541.28
1:3	1666.67	1679.74	833.33	834.09
1:9	555.56	551.65	277.78	277.82
1:27	185.19	191.67	92.59	92.79
1:81	61.73	57.04	30.86	31.44
1:243	20.58	17.72	10.29	8.78
1:729	6.86	8.00	3.43	3.43
IL-15			IL-17	
Dilution	Conc. (pg/ml)	Estimated Conc.(pg/ml)	Conc. (pg/ml)	Estimated Conc.(pg/ml)
1:1	4000.00	4003.80	2000.00	1978.70
1:3	1333.33	1340.39	666.67	688.26
1:9	444.44	447.34	222.22	223.15
1:27	148.15	144.33	74.07	74.42
1:81	49.38	55.05	24.69	23.15
1:243	16.46	21.86	8.23	9.85
1:729	5.49	2.47	2.74	0.62
IL-23			IFNg	
Dilution	Conc. (pg/ml)	Estimated Conc.(pg/ml)	Conc. (pg/ml)	Estimated Conc.(pg/ml)
1:1	80000.00	80078.43	600.00	599.75
1:3	26666.67	26658.14	200.00	200.30
1:9	8888.89	8915.54	66.67	66.48
1:27	2962.96	3036.90	22.22	22.45
1:81	987.65	646.82	7.41	7.25
1:243	329.22	39.37	2.47	2.30
1:729	109.74	804.57	0.82	0.74
TNFa			TNFb	
Dilution	Conc. (pg/ml)	Estimated Conc.(pg/ml)	Conc. (pg/ml)	Estimated Conc.(pg/ml)
1:1	2300.00	2343.72	6000.00	6018.64
1:3	766.67	767.48	2000.00	1991.79
1:9	255.56	255.89	666.67	673.29
1:27	85.19	84.31	222.22	219.33
1:81	28.40	29.71	74.07	71.23
1:243	9.47	10.09	24.69	20.96
1:729	3.16	1.79	8.23	10.56

** Average of 2 duplicate samples.

Table S2. Analysis of Variance. Significance of subject-to-subject changes in cytokine expression when compared with replicate error based on parametric a one-way ANOVA (ANOVA-1) and the non-parametric Kruskal-Wallis test.

		p ANOVA-1		p Kruskal-Wallis	
		PI-CFS (Log)	Recovering Ctrl (Log)	PI-CFS	Recovering Control
IL-1a	(pg/ml)	0.305	0.123	0.299	0.099
IL-1b	(pg/ml)	0.001	0.000	0.100	0.040
IL-2	(pg/ml)	0.064	0.015	0.071	0.106
IL-4	(pg/ml)	0.104	0.002	0.173	0.235
IL-5	(pg/ml)	0.000	0.041	0.081	0.119
IL-6	(pg/ml)	0.000	0.000	0.036	0.038
IL-8	(pg/ml)	0.000	0.000	0.035	0.030
IL-10	(pg/ml)	0.355	0.081	0.381	0.069
IL-12p70	(pg/ml)	0.023	0.079	0.099	0.160
IL-13	(pg/ml)	0.038	0.358	0.105	0.356
IL-15	(pg/ml)	0.000	0.000	0.056	0.026
IL-17	(pg/ml)	0.217	0.194	0.226	0.378
IL-23	(pg/ml)	0.000	0.000	0.039	0.021
IFN-g	(pg/ml)	0.018	0.000	0.145	0.047
TNFa	(pg/ml)	0.003	0.000	0.135	0.103
TNFb	(pg/ml)	0.203	0.000	0.181	0.312

Table S3. Overview of Results. Summary statistics and statistical significance of the change in Chalder fatigue score and in the expression in 16 cytokines measured in plasma for the PI-CFS group compared to control subjects.

		PI-CFS		Recovering Ctrl		PI-CFS vs Ctrl	
		Mean (Std. Dev.)	Median (MADM)	Mean (Std. Dev.)	Median (MADM)	t test	Wilcoxon
Chalder Fatigue Score		18.33 (5.04)	17.00 (3.00)	11.00 (3.66)	11.00 (0.50)	<i>0.000</i>	<i>0.000</i>
						* t test Log(x)	
IL-1a	(pg/ml)	23.04 (59.95)	5.43 (2.76)	5.82 (4.23)	4.36 (2.91)	0.439	0.657
IL-1b	(pg/ml)	31.11 (22.03)	22.76 (3.80)	50.56 (64.31)	23.25 (9.99)	0.788	0.684
IL-2	(pg/ml)	26.22 (29.65)	13.29 (13.29)	5.98 (10.55)	1.50 (0.53)	<i>0.002</i>	0.073
IL-4	(pg/ml)	2.16 (0.45)	2.31 (0.28)	2.57 (2.16)	1.96 (0.52)	0.921	0.423
IL-5	(pg/ml)	6.90 (4.83)	4.66 (0.46)	7.88 (2.79)	7.80 (2.03)	0.110	<i>0.026</i>
IL-6	(pg/ml)	34.51 (45.05)	4.46 (3.63)	10.72 (15.91)	2.81 (1.93)	0.153	0.280
IL-8	(pg/ml)	177.09 (173.55)	54.64 (47.21)	37.61 (92.38)	4.52 (2.32)	<i>0.000</i>	<i>0.000</i>
IL-10	(pg/ml)	23.67 (17.69)	16.70 (6.59)	19.03 (17.07)	13.04 (3.85)	0.330	0.395
IL-12p70	(pg/ml)	18.91 (29.46)	6.29 (3.65)	16.54 (21.24)	7.27 (4.76)	0.938	0.949
IL-13	(pg/ml)	3.94 (2.70)	3.23 (1.05)	2.65 (1.24)	2.43 (0.54)	0.073	0.071
IL-15	(pg/ml)	34.92 (24.00)	32.72 (20.17)	23.23 (17.88)	15.64 (6.89)	0.096	0.118
IL-17	(pg/ml)	3.93 (5.21)	2.16 (1.49)	1.73 (2.03)	1.00 (1.00)	0.455	0.121
IL-23	(pg/ml)	19798.00 (33373.00)	542.12 (385.45)	14077.00 (13724.00)	5329.60 (3731.60)	<i>0.012</i>	<i>0.030</i>
IFN-g	(pg/ml)	1.60 (0.83)	1.28 (0.16)	2.25 (2.18)	1.51 (0.38)	0.338	0.423
TNFa	(pg/ml)	16.99 (21.15)	8.70 (4.18)	15.10 (15.40)	8.45 (2.52)	0.923	0.770
TNFb	(pg/ml)	3.50 (2.90)	3.09 (2.11)	11.42 (25.88)	3.39 (3.39)	0.335	0.769

Table S4. Cytokine-cytokine Correlation Structure. Pearson correlation coefficient r and associated null probability (p -value) for co-expression patterns existing between cytokines in the PI-CFS patient group and in the group of recovering control subjects.

Correlation coefficients with p -value for log transformed concentrations in all PI-CFS groups																		
	IL-1a	IL-1b	IL-2	IL-4	IL-5	IL-6	IL-8	IL-10	IL-12p70	IL-13	IL-15	IL-17	IL-23	IFN-g	TNFa	TNFb		
IL-1a	1.00 (0.00)	0.45 (0.06)	0.17 (0.51)	0.40 (0.10)	0.43 (0.07)	-0.16 (0.51)	-0.27 (0.28)	0.27 (0.28)	0.54 (0.02)	0.50 (0.04)	0.34 (0.17)	0.23 (0.36)	0.34 (0.17)	0.10 (0.68)	0.28 (0.27)	0.30 (0.23)		
IL-1b	0.45 (0.06)	1.00 (0.00)	0.62 (0.01)	0.55 (0.02)	0.65 (0.00)	-0.05 (0.85)	-0.23 (0.35)	0.44 (0.07)	0.61 (0.01)	0.48 (0.04)	0.52 (0.03)	0.53 (0.02)	0.30 (0.22)	0.21 (0.41)	0.54 (0.02)	0.65 (0.00)		
IL-2	0.17 (0.51)	0.62 (0.01)	1.00 (0.00)	0.58 (0.01)	0.37 (0.13)	0.46 (0.05)	0.36 (0.15)	0.43 (0.08)	0.54 (0.02)	0.26 (0.30)	0.82 (0.00)	0.58 (0.01)	0.23 (0.35)	0.11 (0.67)	0.34 (0.16)	0.71 (0.00)		
IL-4	0.40 (0.10)	0.55 (0.02)	0.58 (0.01)	1.00 (0.00)	0.20 (0.43)	-0.04 (0.86)	-0.17 (0.50)	0.19 (0.45)	0.67 (0.00)	0.32 (0.20)	0.40 (0.10)	0.35 (0.15)	0.17 (0.50)	-0.19 (0.45)	0.22 (0.39)	0.82 (0.00)		
IL-5	0.43 (0.07)	0.65 (0.00)	0.37 (0.13)	0.20 (0.43)	1.00 (0.00)	-0.36 (0.14)	-0.43 (0.07)	0.67 (0.00)	0.63 (0.00)	0.65 (0.00)	0.39 (0.11)	0.48 (0.05)	0.77 (0.00)	0.64 (0.00)	0.70 (0.00)	0.35 (0.16)		
IL-6	-0.16 (0.51)	-0.05 (0.85)	0.46 (0.05)	-0.04 (0.86)	-0.36 (0.14)	1.00 (0.00)	0.93 (0.00)	-0.17 (0.50)	-0.19 (0.46)	-0.07 (0.79)	0.63 (0.01)	0.02 (0.94)	-0.39 (0.11)	-0.01 (0.96)	-0.17 (0.50)	0.14 (0.59)		
IL-8	-0.27 (0.28)	-0.23 (0.35)	0.36 (0.15)	-0.17 (0.50)	-0.43 (0.07)	0.93 (0.00)	1.00 (0.00)	-0.21 (0.41)	-0.27 (0.27)	-0.18 (0.48)	0.51 (0.03)	0.02 (0.94)	-0.31 (0.21)	0.02 (0.94)	-0.21 (0.39)	0.05 (0.83)		
IL-10	0.27 (0.28)	0.44 (0.07)	0.43 (0.08)	0.19 (0.45)	0.67 (0.00)	-0.17 (0.50)	-0.21 (0.41)	1.00 (0.00)	0.38 (0.12)	0.32 (0.20)	0.25 (0.31)	0.23 (0.35)	0.57 (0.01)	0.41 (0.09)	0.62 (0.01)	0.43 (0.07)		
IL-12p70	0.54 (0.02)	0.61 (0.01)	0.54 (0.02)	0.67 (0.00)	0.63 (0.00)	-0.19 (0.46)	-0.27 (0.27)	0.38 (0.12)	1.00 (0.00)	0.64 (0.00)	0.53 (0.02)	0.61 (0.01)	0.68 (0.00)	0.34 (0.17)	0.66 (0.00)	0.60 (0.01)		
IL-13	0.50 (0.04)	0.48 (0.04)	0.26 (0.30)	0.32 (0.20)	0.65 (0.00)	-0.07 (0.79)	-0.18 (0.48)	0.32 (0.20)	0.64 (0.00)	1.00 (0.00)	0.50 (0.03)	0.32 (0.20)	0.58 (0.01)	0.57 (0.01)	0.44 (0.07)	0.32 (0.20)		
IL-15	0.34 (0.17)	0.52 (0.03)	0.82 (0.00)	0.40 (0.10)	0.39 (0.11)	0.63 (0.01)	0.51 (0.03)	0.25 (0.31)	0.53 (0.02)	0.50 (0.03)	1.00 (0.00)	0.46 (0.05)	0.26 (0.29)	0.38 (0.12)	0.38 (0.12)	0.59 (0.01)		
IL-17	0.23 (0.36)	0.53 (0.02)	0.58 (0.01)	0.35 (0.15)	0.48 (0.05)	0.02 (0.94)	0.02 (0.94)	0.23 (0.35)	0.61 (0.01)	0.32 (0.20)	0.46 (0.05)	1.00 (0.00)	0.43 (0.07)	0.18 (0.47)	0.53 (0.02)	0.36 (0.14)		
IL-23	0.34 (0.17)	0.30 (0.22)	0.23 (0.35)	0.17 (0.50)	0.77 (0.00)	-0.39 (0.11)	-0.31 (0.21)	0.57 (0.01)	0.68 (0.00)	0.58 (0.01)	0.26 (0.29)	0.43 (0.07)	1.00 (0.00)	0.71 (0.00)	0.61 (0.01)	0.27 (0.27)		
IFN-g	0.10 (0.68)	0.21 (0.41)	0.11 (0.67)	-0.19 (0.45)	0.64 (0.00)	-0.01 (0.96)	0.02 (0.94)	0.41 (0.09)	0.34 (0.17)	0.57 (0.01)	0.38 (0.12)	0.18 (0.47)	0.71 (0.00)	1.00 (0.00)	0.63 (0.00)	0.12 (0.63)		
TNFa	0.28 (0.27)	0.54 (0.02)	0.34 (0.16)	0.22 (0.39)	0.70 (0.00)	-0.17 (0.50)	-0.21 (0.39)	0.62 (0.01)	0.66 (0.00)	0.44 (0.07)	0.38 (0.12)	0.53 (0.02)	0.61 (0.01)	0.63 (0.00)	1.00 (0.00)	0.46 (0.06)		
TNFb	0.30 (0.23)	0.65 (0.00)	0.71 (0.00)	0.82 (0.00)	0.35 (0.16)	0.14 (0.59)	0.05 (0.83)	0.43 (0.07)	0.60 (0.01)	0.32 (0.20)	0.59 (0.01)	0.36 (0.14)	0.27 (0.27)	0.12 (0.63)	0.46 (0.06)	1.00 (0.00)		
Correlation coefficients with p -value for log transformed concentrations in Ctrl group only																		
	IL-1a	IL-1b	IL-2	IL-4	IL-5	IL-6	IL-8	IL-10	IL-12p70	IL-13	IL-15	IL-17	IL-23	IFN-g	TNFa	TNFb		
IL-1a	1.00 (0.00)	0.25 (0.24)	0.21 (0.33)	0.23 (0.28)	0.12 (0.59)	-0.17 (0.42)	-0.50 (0.01)	0.02 (0.94)	0.32 (0.13)	0.18 (0.41)	0.12 (0.59)	0.12 (0.57)	0.00 (1.00)	0.20 (0.36)	-0.04 (0.87)	0.14 (0.52)		
IL-1b	0.25 (0.24)	1.00 (0.00)	0.33 (0.12)	0.79 (0.00)	0.62 (0.00)	0.48 (0.02)	0.01 (0.98)	0.24 (0.26)	0.65 (0.00)	0.57 (0.00)	0.90 (0.00)	0.45 (0.03)	0.22 (0.30)	0.53 (0.01)	0.83 (0.00)	0.56 (0.00)		
IL-2	0.21 (0.33)	0.33 (0.12)	1.00 (0.00)	0.03 (0.89)	-0.04 (0.87)	0.06 (0.77)	-0.05 (0.83)	0.31 (0.14)	0.37 (0.07)	0.50 (0.01)	0.32 (0.13)	0.30 (0.15)	0.44 (0.03)	-0.32 (0.12)	-0.01 (0.98)	0.20 (0.35)		
IL-4	0.23 (0.28)	0.79 (0.00)	0.03 (0.89)	1.00 (0.00)	0.31 (0.14)	0.40 (0.06)	-0.05 (0.83)	-0.21 (0.32)	0.64 (0.00)	0.40 (0.05)	0.57 (0.00)	0.36 (0.08)	-0.03 (0.90)	0.58 (0.00)	0.77 (0.00)	0.80 (0.00)		
IL-5	0.12 (0.59)	0.62 (0.00)	-0.04 (0.87)	0.31 (0.14)	1.00 (0.00)	0.21 (0.33)	0.04 (0.87)	0.45 (0.03)	0.42 (0.04)	0.07 (0.76)	0.77 (0.00)	0.08 (0.72)	0.20 (0.35)	0.54 (0.01)	0.54 (0.01)	-0.11 (0.61)		
IL-6	-0.17 (0.42)	0.48 (0.02)	0.06 (0.77)	0.40 (0.06)	0.21 (0.33)	1.00 (0.00)	0.67 (0.00)	0.36 (0.09)	0.29 (0.17)	0.32 (0.12)	0.44 (0.03)	0.44 (0.03)	-0.11 (0.63)	0.33 (0.11)	0.46 (0.03)	0.32 (0.13)		
IL-8	-0.50 (0.01)	0.01 (0.98)	-0.05 (0.83)	-0.05 (0.83)	0.04 (0.87)	0.67 (0.00)	1.00 (0.00)	0.43 (0.04)	-0.15 (0.49)	-0.08 (0.71)	0.09 (0.66)	0.19 (0.38)	-0.19 (0.38)	-0.13 (0.56)	0.09 (0.68)	-0.08 (0.71)		
IL-10	0.02 (0.94)	0.24 (0.26)	0.31 (0.14)	-0.21 (0.32)	0.45 (0.03)	0.36 (0.09)	0.43 (0.04)	1.00 (0.00)	0.05 (0.81)	0.07 (0.73)	0.45 (0.03)	0.07 (0.76)	0.41 (0.04)	-0.09 (0.68)	0.15 (0.48)	-0.35 (0.09)		
IL-12p70	0.32 (0.13)	0.65 (0.00)	0.37 (0.07)	0.64 (0.00)	0.42 (0.04)	0.29 (0.17)	-0.15 (0.49)	0.05 (0.81)	1.00 (0.00)	0.37 (0.08)	0.57 (0.00)	0.31 (0.14)	0.36 (0.09)	0.56 (0.00)	0.53 (0.01)	0.47 (0.02)		
IL-13	0.18 (0.41)	0.57 (0.00)	0.50 (0.01)	0.40 (0.05)	0.07 (0.76)	0.32 (0.12)	-0.08 (0.71)	0.07 (0.73)	0.37 (0.08)	1.00 (0.00)	0.51 (0.01)	0.58 (0.00)	0.19 (0.38)	0.05 (0.83)	0.35 (0.09)	0.50 (0.01)		
IL-15	0.12 (0.59)	0.90 (0.00)	0.32 (0.13)	0.57 (0.00)	0.77 (0.00)	0.44 (0.03)	0.09 (0.66)	0.45 (0.03)	0.57 (0.00)	0.51 (0.01)	1.00 (0.00)	0.39 (0.06)	0.39 (0.06)	0.45 (0.03)	0.81 (0.00)	0.29 (0.17)		
IL-17	0.12 (0.57)	0.45 (0.03)	0.30 (0.15)	0.36 (0.08)	0.08 (0.72)	0.44 (0.03)	0.19 (0.38)	0.07 (0.76)	0.31 (0.14)	0.58 (0.00)	0.39 (0.06)	1.00 (0.00)	0.13 (0.56)	0.15 (0.49)	0.33 (0.12)	0.33 (0.11)		
IL-23	0.00 (1.00)	0.22 (0.30)	0.44 (0.03)	-0.03 (0.90)	0.20 (0.35)	-0.11 (0.63)	-0.19 (0.38)	0.41 (0.04)	0.36 (0.09)	0.19 (0.38)	0.39 (0.06)	0.13 (0.56)	1.00 (0.00)	0.09 (0.67)	0.26 (0.21)	-0.06 (0.79)		
IFN-g	0.20 (0.36)	0.53 (0.01)	-0.32 (0.12)	0.58 (0.00)	0.54 (0.01)	0.33 (0.11)	-0.13 (0.56)	-0.09 (0.68)	0.56 (0.00)	0.05 (0.83)	0.45 (0.03)	0.15 (0.49)	0.09 (0.67)	1.00 (0.00)	0.57 (0.00)	0.27 (0.20)		
TNFa	-0.04 (0.87)	0.83 (0.00)	-0.01 (0.98)	0.77 (0.00)	0.54 (0.01)	0.46 (0.03)	0.09 (0.68)	0.15 (0.48)	0.53 (0.01)	0.35 (0.09)	0.81 (0.00)	0.33 (0.12)	0.26 (0.21)	0.57 (0.00)	1.00 (0.00)	0.48 (0.02)		
TNFb	0.14 (0.52)	0.56 (0.00)	0.20 (0.35)	0.80 (0.00)	-0.11 (0.61)	0.32 (0.13)	-0.08 (0.71)	-0.35 (0.09)	0.47 (0.02)	0.50 (0.01)	0.29 (0.17)	0.33 (0.11)	-0.06 (0.79)	0.27 (0.20)	0.48 (0.02)	1.00 (0.00)		

Table S5. Alternative Classification Models. Performance of linear classification models were IL-5 has been substituted for IL-23 or IFN- γ or both to resolve collinearity issues with the latter by simple truncation. Statistics are shown for classification performance where a 90% confidence in assignment is imposed (Linear cw 90% conf.) and where the score alone is considered (Linear uncorrected).

	Classification based on IL-2, 6, 8, 5, IFN γ		Classification based on IL-2, 6, 8, 23, 5		Classification based on IL-2, 6, 8, 5	
	Linear cw 90% Conf	Linear uncorrected	Linear cw 90% Conf	Linear uncorrected	Linear cw 90% Conf	Linear uncorrected
Correct Rate	0.96	0.88	0.92	0.86	0.96	0.83
Error Rate	0.04	0.12	0.08	0.14	0.04	0.17
Inconclusive Rate	0.36	0.00	0.40	0.00	0.38	0.00
Classified Rate	0.64	1.00	0.60	1.00	0.62	1.00
Sensitivity	0.61	0.89	0.56	0.89	0.56	0.89
Specificity	0.63	0.88	0.54	0.83	0.63	0.79
Positive Predictive Value	0.55	0.84	0.48	0.80	0.53	0.76
Negative Predictive Value	0.68	0.91	0.62	0.91	0.65	0.90
Positive Likelihood	1.63	7.11	1.21	5.33	1.48	4.27
Negative Likelihood	0.62	0.13	0.82	0.13	0.71	0.14

Table S6. Sensitivity study of n=4 Absent PI-CFS Profiles. In order to assess the impact of the n=4 sets of duplicate cytokine profiles missing from the n=13 PI-CFS subject group, a series of 20, 50 and 100 simulation experiments were conducted. In each experiment a random set of n=4 sets of duplicate samples were selected from the recovered control data and added to the PI-CFS set. A stepwise regression model was then used to select discriminating cytokines based on this artificially augmented data. Below is the frequency with which each cytokine was selected in the 50 regression models.

	IL-1a	IL-1b	IL-2	IL-4	IL-5	IL-6	IL-8	IL-10	IL-12p70	IL-13	IL-15	IL-17	IL-23	IFNg	TNFa	TNFb
20 iterations	13	0	0	1	0	17	20	0	0	7	1	2	8	0	0	0
20 iterations	11	0	0	1	0	15	20	0	1	5	0	3	6	0	0	1
50 iterations	34	1	0	0	0	42	50	0	2	15	1	4	17	1	0	2
50 iterations	30	1	0	0	0	35	50	0	2	10	2	4	11	1	0	3
100 iterations	70	7	0	1	0	77	99	1	3	28	7	12	29	1	0	2
100 iterations	65	3	0	0	0	80	100	0	3	31	10	11	34	2	0	5
Average Selection Frequency (%)	64	2	0	2	0	79	100	0	3	28	5	11	32	1	0	4