

## **Supplementary Material**

### **1 Supplementary Tables**

Supplementary table 1. Components of the full blood count in participants in the placebo and probiotic groups

Parameter and reference value (10 <sup>9</sup> /L)	Placebo (n=30)	Probiotic (n=30)	Covariables	Adjusted mean difference (95% CI)		p-value
Descriptive statistics categorised according to allocation			ANCOVA Neutrophils (LogTr)			
Neutrophils (2.0 - 7.5)	Mean ± SE	Mean ± SE	Trial Arm	0.006	(-0.058 0.069)	0.861
Baseline	4.8 ± 0.4	4.6 ± 0.4	Sex	0.017	(-0.047 0.081)	0.593
Post-intervention	4.4 ± 0.3	4.7 ± 0.3	Baseline	0.520	(0.348 0.691)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA Lymphocytes (LogTr)			
Lymphocytes (1.5 - 5.0)	Mean ± SE	Mean ± SE	Trial Arm	0.018	(-0.047 0.082)	0.583
Baseline	1.4 ± 0.1	2.4 ± 0.5	Sex	0.007	(-0.055 0.068)	0.826
Post-intervention	1.5 ± 0.1	2.5 ± 0.6	Baseline	0.796	(0.651 0.940)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA Monocytes (LogTr)			
Monocytes (0.2 - 1.0)	Mean ± SE	Mean ± SE	Trial Arm	-0.023	(-0.104 0.058)	0.566
Baseline	0.5 ± 0.0	0.6 ± 0.0	Sex	-0.020	(-0.099 0.060)	0.623
Post-intervention	0.5 ± 0.0	0.6 ± 0.1	Baseline	0.665	(0.403 0.928)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA Total leukocytes (LogTr)			
Total leukocytes (4 – 11.0)	Mean ± SE	Mean ± SE	Trial Arm	0.014	(-0.035 0.064)	0.563
Baseline	6.9 ± 0.4	8.0 ± 0.6	Sex	0.006	(-0.044 0.055)	0.824
Post-intervention	7.1 ± 0.4	8.2 ± 0.7	Baseline	0.702	(0.535 0.868)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA Platelets (LogTr)			
Platelets (140 - 400)	Mean ± SE	Mean ± SE	Trial Arm	0.019	(-0.021 0.060)	0.347
Baseline	282 ± 16	292 ± 23	Sex	-0.008	(-0.054 0.037)	0.718
Post-intervention	267 ± 21	284 ± 15	Baseline	0.832	(0.668 0.995)	< 0.001
Descriptive statistics categorised according to allocation			Mann-Whitney Test – Factor Allocation			
Eosinophils (0.0 - 0.5)	Mean ± SE	Mean ± SE	Eosinophils	p-value		
Baseline	0.2 ± 0.0	0.2 ± 0.0	Post-intervention	0.816		
Post-intervention	0.2 ± 0.0	0.3 ± 0.0				
Basophils (0.0 - 0.1)	Mean ± SE	Mean ± SE	Basophils	p-value		

Baseline	0.0 ± 0.0	0.1 ± 0.0	Post-intervention	0.688
Post-intervention	0.1 ± 0.0	0.1 ± 0.1		

ANCOVA modelling used log transformed (LogTr) data to determine the effects of trial arm (allocation: probiotic or placebo), sex, and baseline value with the post-intervention variable considered as the dependent outcome. Significance levels were defined as p-values <0.05. Eosinophils and basophils received a different statistical treatment to determine significance due to the nature of the variable (values including zero); thus the Mann-Whitney test was used. Significant levels were defined as p-values <0.05.

Supplementary table 2. Blood immune cell phenotypes in participants in the placebo and probiotic groups

Variable (cells/ $\mu$ l)	Placebo (n=30)	Probiotic (n=30)	Covariable	Adjusted mean difference (95% CI)		p-value
Descriptive statistics categorised according to allocation			ANCOVA T cells (LogTr)			
T cells	Mean $\pm$ SE	Mean $\pm$ SE	Trial Arm	0.03	(-0.02 0.08)	0.26
Baseline	1298 $\pm$ 51	1338 $\pm$ 79	Sex	0.04	(-0.01 0.10)	0.12
Post-intervention	1388 $\pm$ 65	1539 $\pm$ 89	Baseline	0.65	(0.41 0.90)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA T helper (LogTr)			
T helper cells	Mean $\pm$ SE	Mean $\pm$ SE	Trial Arm	0.01	(-0.06 0.07)	0.79
Baseline	886 $\pm$ 64	912 $\pm$ 82	Sex	0.05	(-0.02 0.11)	0.17
Post-intervention	986 $\pm$ 73	1015 $\pm$ 80	Baseline	0.79	(0.66 0.93)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA T regs (LogTr)			
T regs	Mean $\pm$ SE	Mean $\pm$ SE	Trial Arm	0.02	(-0.08 0.12)	0.71
Baseline	87 $\pm$ 15	86 $\pm$ 14	Sex	-0.05	(-0.16 0.06)	0.34
Postintervention	80 $\pm$ 14	84 $\pm$ 13	Baseline	0.79	(0.67 0.92)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA T cytotoxic (LogTr)			
T cytotoxic cells	Mean $\pm$ SE	Mean $\pm$ SE	Trial Arm	-0.01	(-0.06 0.04)	0.67
Baseline	631 $\pm$ 35	767 $\pm$ 33	Sex	-0.04	(-0.08 0.00)	0.07
Postintervention	717 $\pm$ 39	803 $\pm$ 38	Baseline	0.74	(0.58 0.90)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA Activated T cytotoxic (LogTr)			
Activated T cytotoxic cells	Mean $\pm$ SE	Mean $\pm$ SE	Trial Arm	-0.02	(-0.09 0.05)	0.59
Baseline	231 $\pm$ 18	270 $\pm$ 19	Sex	-0.02	(-0.10 0.05)	0.48
Postintervention	279 $\pm$ 14	282 $\pm$ 21	Baseline	0.10	(-0.05 0.26)	0.19
Descriptive statistics categorised according to allocation			ANCOVA Ratio CD4 <sup>+</sup> :CD8 <sup>+</sup> (LogTr)			
Ratio CD4 <sup>+</sup> :CD8 <sup>+</sup>	Mean $\pm$ SE	Mean $\pm$ SE	Trial Arm	0.02	(-0.05 0.10)	0.56
Baseline	1.4 $\pm$ 0.1	1.2 $\pm$ 0.1	Sex	0.09	(0.02 0.16)	0.02
Postintervention	1.4 $\pm$ 0.1	1.3 $\pm$ 0.1	Baseline	0.76	(0.56 0.95)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA NK cells (LogTr)			

NK cells	Mean ± SE	Mean ± SE	Trial Arm	0.04	(-0.04	0.12)	0.33
Baseline	81 ± 5	82 ± 6	Sex	0.03	(-0.05	0.11)	0.46
Postintervention	73 ± 5	79 ± 4	Baseline	0.33	(0.04	0.63)	0.03
Descriptive statistics categorised according to allocation			ANCOVA B cells (LogTr)				
B cells	Mean ± SE	Mean ± SE	Trial Arm	-0.04	(-0.09	0.01)	0.10
Baseline	221 ± 20	240 ± 20	Sex	0.02	(-0.02	0.07)	0.34
Postintervention	224 ± 21	232 ± 20	Baseline	0.84	(0.73	0.95)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA B cells CD80 <sup>+</sup> (LogTr)				
B cells CD80 <sup>+</sup>	Mean ± SE	Mean ± SE	Trial Arm	0.00	(-0.05	0.05)	0.96
Baseline	138 ± 11	149 ± 16	Sex	-0.01	(-0.05	0.04)	0.81
Postintervention	127 ± 12	143 ± 17	Baseline	0.86	(0.74	0.98)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA B cells CD86 <sup>+</sup> (LogTr)				
B cells CD86 <sup>+</sup>	Mean ± SE	Mean ± SE	Trial Arm	-0.02	(-0.07	0.03)	0.52
Baseline	142 ± 12	156 ± 17	Sex	-0.03	(-0.08	0.02)	0.23
Postintervention	140 ± 14	152 ± 18	Baseline	0.88	(0.76	1.01)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA Monocytes (LogTr)				
Monocytes	Mean ± SE	Mean ± SE	Trial Arm	-0.02	(-0.11	0.07)	0.60
Baseline	448 ± 32	578 ± 38	Sex	0.00	(-0.09	0.08)	0.92
Postintervention	504 ± 41	570 ± 40	Baseline	0.80	(0.57	1.02)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA Monocytes CD80 <sup>+</sup> (LogTr)				
Monocytes CD80 <sup>+</sup>	Mean ± SE	Mean ± SE	Trial Arm	0.02	(-0.11	0.16)	0.75
Baseline	155 ± 21	164 ± 26	Sex	-0.07	(-0.21	0.07)	0.30
Postintervention	113 ± 18	120 ± 23	Baseline	0.71	(0.52	0.91)	< 0.001
Descriptive statistics categorised according to allocation			ANCOVA Monocytes CD86 <sup>+</sup> (LogTr)				
Monocytes CD86 <sup>+</sup>	Mean ± SE	Mean ± SE	Trial Arm	0.07	(-0.14	0.28)	0.50
Baseline	131 ± 18	122 ± 20	Sex	0.04	(-0.17	0.25)	0.71
Postintervention	111 ± 20	124 ± 22	Baseline	0.87	(0.65	1.08)	< 0.001

ANCOVA modelling used log transformed (LogTr) data to determine the effects of trial arm (allocation: probiotic or placebo), sex, and baseline value with the post-intervention variable considered as the dependent outcome. Significance levels were defined as p-values <0.05.

Supplementary table 3. Phagocyte function of neutrophils and monocytes from participants in the placebo and probiotic groups

Variable	Placebo (n=30)	Probiotic (n=30)	Covariable	Adjusted mean difference (95% CI)		p-value
Descriptive statistics categorised according to Trial Arm			ANCOVA Phagocytic Activity Neutrophils % (LogTr)			
Phagocytic activity Neutrophils (%)	Mean ± SE	Mean ± SE	Trial Arm	0.006	(-0.028 0.039)	0.727
Baseline	78.7 ± 1.8	81.2 ± 1.4	Sex	0.024	(-0.010 0.058)	0.158
Post-intervention	81.8 ± 2.1	83.1 ± 2.5	Baseline	0.207	(0.028 0.386)	0.025
Descriptive statistics categorised according to Trial Arm			ANCOVA Phagocytic Activity Neutrophils GMFL (LogTr)			
Phagocytic activity Neutrophils (GMFL)	Mean ± SE	Mean ± SE	Trial Arm	0.014	(-0.052 0.081)	0.666
Baseline	272.8 ± 10.2	243.4 ± 9.5	Sex	0.057	(-0.008 0.123)	0.084
Post-intervention	247.7 ± 11.4	245.2 ± 14.8	Baseline	0.398	(0.145 0.650)	0.003
Descriptive statistics categorised according to Trial Arm			ANCOVA Phagocytic Activity Monocytes % (LogTr)			
Phagocytic activity Monocytes (%)	Mean ± SE	Mean ± SE	Trial Arm	0.032	(-0.069 0.134)	0.524
Baseline	33.9 ± 1.6	28.3 ± 1.4	Sex	0.001	(-0.098 0.100)	0.979
Post-intervention	29.6 ± 1.9	29.5 ± 2.1	Baseline	0.333	(0.100 0.566)	0.006
Descriptive statistics categorised according to Trial Arm			ANCOVA Phagocytic Activity Monocytes GMFL (LogTr)			
Phagocytic activity Monocytes (GMFL)	Mean ± SE	Mean ± SE	Trial Arm	0.028	(-0.048 0.104)	0.465
Baseline	182.3 ± 8.7	184.3 ± 11.0	Sex	-0.013	(-0.089 0.063)	0.738
Post-intervention	174.0 ± 9.5	184.9 ± 11.6	Baseline	0.039	(-0.176 0.254)	0.070

ANCOVA modelling used log transformed (LogTr) data to determine the effects of trial arm (allocation: probiotic or placebo), sex, and baseline value with the post-intervention variable considered as the dependent outcome. Significance levels were defined as p-values <0.05. GMFL=Geometric Mean Fluorescence intensity

Supplementary table 4. Plasma immune mediator concentrations in participants in the placebo and probiotic groups

Variable	Placebo (n=18)	Probiotic (n=18)	Covariable	Adjusted mean difference (95% CI)			p-value
Descriptive statistics categorised according to trial arm				ANCOVA ICAM-1 (LogTr)			
ICAM-1 (ng/ml)	Mean ± SE	Mean ± SE	Trial arm	0.042	(-0.032	0.117)	0.252
Baseline	460 ± 42	425 ± 33	Sex	0.066	(-0.01	0.142)	0.087
Post-intervention	425 ± 64	440 ± 53	Baseline	0.916	(0.740	1.092)	< 0.001
Descriptive statistics categorised according to trial arm				ANCOVA IL-1ra (LogTr)			
IL-1ra (ng/ml)	Mean ± SE	Mean ± SE	Trial arm	0.032	(-0.148	0.212)	0.718
Baseline	2.24 ± 0.34	2.23 ± 0.27	Sex	0.120	(-0.062	0.303)	0.189
Post-intervention	2.49 ± 0.68	2.52 ± 0.44	Baseline	0.761	(0.496	1.026)	< 0.001
Descriptive statistics categorised according to trial arm				ANCOVA E-Selectin (LogTr)			
E-Selectin (ng/ml)	Mean ± SE	Mean ± SE	Trial arm	0.011	(-0.108	0.129)	0.853
Baseline	25.0 ± 2.2	25.1 ± 1.9	Sex	-0.032	(-0.150	0.087)	0.591
Post-intervention	24.2 ± 2.7	25.4 ± 3.8	Baseline	0.757	(0.523	0.991)	< 0.001
Descriptive statistics categorised according to trial arm				ANCOVA VCAM-1 (LogTr)			
VCAM-1 (ng/ml)	Mean ± SE	Mean ± SE	Trial arm	-0.003	(-0.120	0.115)	0.964
Baseline	1040 ± 75	804 ± 53	Sex	0.025	(-0.092	0.141)	0.671
Post-intervention	1152 ± 199	914 ± 108	Baseline	1.013	(0.693	1.334)	< 0.001
Descriptive statistics categorised according to trial arm				ANCOVA MCP-1 (LogTr)			
MCP-1 (ng/ml)	Mean ± SE	Mean ± SE	Trial arm	0.073	(-0.047	0.193)	0.224
Baseline	0.4 ± 0.04	0.4 ± 0.03	Sex	0.049	(-0.074	0.172)	0.423
Post-intervention	0.4 ± 0.05	0.4 ± 0.04	Baseline	0.670	(0.348	0.991)	< 0.001
Descriptive statistics categorised according to trial arm				ANCOVA IP-10 (LogTr)			
IP-10 (ng/ml)	Mean ± SE	Mean ± SE	Trial arm	-0.002	(-0.162	0.158)	0.981
Baseline	0.2 ± 0.01	0.2 ± 0.01	Sex	-0.008	(-0.176	0.16)	0.923
Post-intervention	0.1 ± 0.02	0.1 ± 0.01	Baseline	0.409	(-0.016	0.834)	0.059

Descriptive statistics categorised according to trial arm			ANCOVA IL-17A (LogTr)				
IL-17A (ng/ml)	Mean ± SE	Mean ± SE	Trial arm	0.076	(-0.191	0.342)	0.567
Baseline	2.3 ± 0.5	2.5 ± 0.4	Sex	-0.183	(-0.445	0.08)	0.166
Post-intervention	3.0 ± 0.8	3.1 ± 0.7	Baseline	0.353	(0.041	0.664)	0.028
Descriptive statistics categorised according to trial arm			ANCOVA TNFR-II (LogTr)				
TNFR-II (ng/ml)	Mean ± SE	Mean ± SE	Trial arm	0.016	(-0.075	0.106)	0.728
Baseline	4.0 ± 0.3	5.0 ± 0.4	Sex	0.070	(-0.019	0.159)	0.120
Post-intervention	3.3 ± 0.4	4.0 ± 0.5	Baseline	0.685	(0.473	0.898)	< 0.001
Descriptive statistics categorised according to trial arm			ANCOVA IL-6 (LogTr)				
IL-6 (pg/ml)	Mean ± SE	Mean ± SE	Trial arm	-0.006	(-0.299	0.287)	0.966
Baseline	7.9 ± 1.5	12.5 ± 4.2	Sex	0.049	(-0.246	0.344)	0.738
Post-intervention	9.8 ± 3.4	6.6 ± 1.6	Baseline	0.199	(-0.221	0.62)	0.340
Descriptive statistics categorised according to trial arm			ANCOVA IL-10 (LogTr)				
IL-10 (pg/ml)	Mean ± SE	Mean ± SE	Trial arm	-0.098	(-0.369	0.172)	0.463
Baseline	0.9 ± 0.2	0.9 ± 0.1	Sex	0.342	(0.065	0.62)	0.017
Post-intervention	0.7 ± 0.1	0.7 ± 0.2	Baseline	0.639	(0.361	0.917)	< 0.001
Descriptive statistics categorised according to trial arm			ANCOVA IL-12p70 (LogTr)				
IL-12p70 (pg/ml)	Mean ± SE	Mean ± SE	Trial arm	0.154	(-0.285	0.593)	0.448
Baseline	1.5 ± 0.3	1.6 ± 0.2	Sex	-0.087	(-0.554	0.381)	0.685
Post-intervention	1.2 ± 0.4	1.6 ± 0.4	Baseline	0.268	(-0.607	1.143)	0.506
Descriptive statistics categorised according to trial arm			ANCOVA TNF-α (LogTr)				
TNF-α (pg/ml)	Mean ± SE	Mean ± SE	Trial arm	0	(-0.076	0.077)	0.991
Baseline	17.0 ± 1.1	19.0 ± 1.6	Sex	0.052	(-0.03	0.135)	0.205
Post-intervention	17.1 ± 1.2	17.4 ± 1.2	Baseline	0.626	(0.325	0.927)	< 0.001
Descriptive statistics categorised according to trial arm			ANCOVA CRP (LogTr)				
CRP (mg/l)	Mean ± SE	Mean ± SE	Trial Arm	1.66	(-0.798	4.118)	0.182
Baseline	6.32 ± 2.16	6.26 ± 1.37	Sex	-1.87	(-4.357	0.618)	0.136
Post-intervention	4.62 ± 0.79	6.10 ± 1.33	Baseline	0.454	(0.322	0.585)	< 0.001

ANCOVA modelling used log transformed (LogTr) data to determine the effects of trial arm (allocation: probiotic or placebo), sex, and baseline value with the post-intervention variable considered as the dependent outcome. Significance levels were defined as p-values  $<0.05$ .

Supplementary table 5. *Ex vivo* responses of LPS-stimulated cultures of whole blood from participants in the placebo and probiotic groups

Variable	Placebo (n=18)	Probiotic (n=18)	Covariable	Adjusted mean difference (95% CI)		p-value
Descriptive statistics categorised according to Trial Arm			ANCOVA IL-10 LPS stimulated (LogTr)			
IL-10 (ng/ml)	Mean ± SE	Mean ± SE	Trial Arm	-0.044	(-0.301 0.213)	0.730
Baseline	4.3 ± 1.7	4.2 ± 1.4	Sex	-0.127	(-0.388 0.134)	0.328
Post-intervention	3.7 ± 0.7	3.9 ± 0.8	Baseline	0.376	(0.128 0.625)	0.004
Descriptive statistics categorised according to Trial Arm			ANCOVA TNF- $\alpha$ LPS stimulated (LogTr)			
TNF- $\alpha$ (ng/ml)	Mean ± SE	Mean ± SE	Trial Arm	-0.051	(-0.28 0.179)	0.655
Baseline	10.9 ± 2.3	13.7 ± 2.6	Sex	-0.099	(-0.326 0.129)	0.384
Post-intervention	11.4 ± 1.9	12.1 ± 2.4	Baseline	0.249	(-0.053 0.551)	0.103
Descriptive statistics categorised according to Trial Arm			ANCOVA IL-6 LPS stimulated (LogTr)			
IL-6 (ng/ml)	Mean ± SE	Mean ± SE	Trial Arm	-0.037	(-0.209 0.135)	0.664
Baseline	40.2 ± 5.3	47.6 ± 6.9	Sex	-0.081	(-0.256 0.094)	0.351
Post-intervention	43.8 ± 4.6	45.7 ± 6.5	Baseline	0.261	(-0.036 0.557)	0.083
Descriptive statistics categorised according to Trial Arm			ANCOVA IL-1 $\beta$ LPS stimulated (LogTr)			
IL-1 $\beta$ (ng/ml)	Mean ± SE	Mean ± SE	Trial Arm	0.095	(-0.205 0.395)	0.522
Baseline	3.8 ± 0.8	6.4 ± 2.8	Sex	-0.274	(-0.576 0.029)	0.075
Post-intervention	4.3 ± 0.7	15.1 ± 8.8	Baseline	0.171	(-0.238 0.581)	0.399

ANCOVA modelling used log transformed (LogTr) data to determine the effects of trial arm (allocation: probiotic or placebo), sex, and baseline value with the post-intervention variable considered as the dependent outcome. Significance levels were defined as p-values <0.05.

Supplementary table 6. *Ex vivo* responses of PGN-stimulated cultures of whole blood from participants in the placebo and probiotic groups

Variable	Placebo (n=18)	Probiotic (n=18)	Covariable	Adjusted mean difference (95% CI)		p-value
Descriptive statistics categorised according to Trial Arm			ANCOVA IL-10 PGN stimulated (LogTr)			
IL-10 (pg/ml)	Mean ± SE	Mean ± SE	Trial Arm	-0.103	(-0.349 0.142)	0.396
Baseline	346 ± 58	583 ± 133	Sex	-0.272	(-0.524 -0.02)	0.035
Post-intervention	580 ± 93	504 ± 99	Baseline	-0.354	(-0.614 0.094)	0.009
Descriptive statistics categorised according to Trial Arm			ANCOVA TNF-α PGN stimulated (LogTr)			
TNF-α (pg/ml)	Mean ± SE	Mean ± SE	Trial Arm	-0.123	(-0.407 0.162)	0.386
Baseline	2377 ± 726	3766 ± 1003	Sex	-0.114	(-0.393 0.166)	0.413
Post-intervention	2675 ± 495	2130 ± 407	Baseline	-0.061	(-0.352 0.23)	0.672
Descriptive statistics categorised according to Trial Arm			ANCOVA IL-6 PGN stimulated (LogTr)			
IL-6 (ng/ml)	Mean ± SE	Mean ± SE	Trial Arm	-0.12	(-0.401 0.16)	0.388
Baseline	36.2 ± 7.2	70.9 ± 17.7	Sex	-0.274	(-0.556 0.009)	0.057
Post-intervention	54.9 ± 7.3	54.0 ± 10.3	Baseline	-0.148	(-0.457 0.162)	0.339
Descriptive statistics categorised according to Trial Arm			ANCOVA IL-1β PGN stimulated (LogTr)			
IL-1β (pg/ml)	Mean ± SE	Mean ± SE	Trial	-0.244	(-0.639 0.15)	0.216
Baseline	166 ± 45.1	321 ± 123	Sex	-0.137	(-0.54 0.266)	0.492
Post-intervention	340 ± 93.8	214 ± 61	Baseline	-0.049	(-0.316 0.218)	0.711

ANCOVA modelling used log transformed (LogTr) data to determine the effects of trial arm (allocation: probiotic or placebo), sex, and baseline value with the post-intervention variable considered as the dependent outcome. Significance levels were defined as p-values <0.05.

Supplementary table 7. *Ex vivo* responses of PHA-stimulated cultures of whole blood from participants in the placebo and probiotic groups

Variable	Placebo (n=18)	Probiotic (n=18)	Covariable	Adjusted mean difference (95% CI)			p-value
Descriptive statistics categorised according to Trial Arm			ANCOVA IFN- $\gamma$ PHA stimulated (LogTr)				
IFN- $\gamma$ (pg/ml)	Mean $\pm$ SE	Mean $\pm$ SE	Trial Arm	0.045	-0.777	0.867	0.912
Baseline	23.2 $\pm$ 17.1	21.3 $\pm$ 8.8	Sex	0.079	-0.713	0.870	0.841
Post-intervention	18.5 $\pm$ 9.4	16.5 $\pm$ 5.6	Baseline	0.383	-0.019	0.785	0.061
Descriptive statistics categorised according to Trial Arm			ANCOVA TNF- $\alpha$ PHA stimulated (LogTr)				
TNF- $\alpha$ (pg/ml)	Mean $\pm$ SE	Mean $\pm$ SE	Trial Arm	-0.024	-0.197	0.148	0.776
Baseline	1343 $\pm$ 156	2013 $\pm$ 168	Sex	0.015	-0.150	0.179	0.854
Post-intervention	1804 $\pm$ 224	2095 $\pm$ 192	Baseline	0.298	-0.015	0.610	0.061

ANCOVA modelling used log transformed (LogTr) data to determine the effects of trial arm (allocation: probiotic or placebo), sex, and baseline value with the post-intervention variable considered as the dependent outcome. Significance levels were defined as p-values <0.05.