

1 **Supplemental Table 1.** Gene table: RT<sup>2</sup> Profiler PCR Array

<b>Sl. No.</b>	<b>Symbol</b>	<b>Description</b>
1	AIMP1	Aminoacyl tRNA synthetase complex-interacting multifunctional protein 1
2	BMP2	Bone morphogenetic protein 2
3	C5	Complement component 5
4	CCL1	Chemokine (C-C motif) ligand 1
5	CCL11	Chemokine (C-C motif) ligand 11
6	CCL13	Chemokine (C-C motif) ligand 13
7	CCL15	Chemokine (C-C motif) ligand 15
8	CCL16	Chemokine (C-C motif) ligand 16
9	CCL17	Chemokine (C-C motif) ligand 17
10	CCL2	Chemokine (C-C motif) ligand 2
11	CCL20	Chemokine (C-C motif) ligand 20
12	CCL22	Chemokine (C-C motif) ligand 22
13	CCL23	Chemokine (C-C motif) ligand 23
14	CCL24	Chemokine (C-C motif) ligand 24
15	CCL26	Chemokine (C-C motif) ligand 26
16	CCL3	Chemokine (C-C motif) ligand 3
17	CCL4	Chemokine (C-C motif) ligand 4
18	CCL5	Chemokine (C-C motif) ligand 5
19	CCL7	Chemokine (C-C motif) ligand 7
20	CCL8	Chemokine (C-C motif) ligand 8
21	CCR1	Chemokine (C-C motif) receptor 1
22	CCR2	Chemokine (C-C motif) receptor 2
23	CCR3	Chemokine (C-C motif) receptor 3
24	CCR4	Chemokine (C-C motif) receptor 4
25	CCR5	Chemokine (C-C motif) receptor 5
26	CCR6	Chemokine (C-C motif) receptor 6
27	CCR8	Chemokine (C-C motif) receptor 8
28	CD40LG	CD40 ligand
29	CSF1	Colony stimulating factor 1 (macrophage)
30	CSF2	Colony stimulating factor 2 (granulocyte-macrophage)

31 CSF3 Colony stimulating factor 3 (granulocyte)  
32 CX3CL1 Chemokine (C-X3-C motif) ligand 1  
33 CX3CR1 Chemokine (C-X3-C motif) receptor 1  
34 CXCL1 Chemokine (C-X-C motif) ligand 1 (melanoma growth  
stimulating activity, alpha)  
35 CXCL10 Chemokine (C-X-C motif) ligand 10  
36 CXCL11 Chemokine (C-X-C motif) ligand 11  
37 CXCL12 Chemokine (C-X-C motif) ligand 12  
38 CXCL13 Chemokine (C-X-C motif) ligand 13  
39 CXCL2 Chemokine (C-X-C motif) ligand 2  
40 CXCL3 Chemokine (C-X-C motif) ligand 3  
41 CXCL5 Chemokine (C-X-C motif) ligand 5  
42 CXCL6 Chemokine (C-X-C motif) ligand 6 (granulocyte  
chemotactic protein 2)  
43 CXCL9 Chemokine (C-X-C motif) ligand 9  
44 CXCR1 Chemokine (C-X-C motif) receptor 1  
45 CXCR2 Chemokine (C-X-C motif) receptor 2  
47 FASLG Fas ligand (TNF superfamily, member 6)  
48 IFNA2 Interferon, alpha 2  
49 IFNG Interferon, gamma  
50 IL10RA Interleukin 10 receptor, alpha  
51 IL10RB Interleukin 10 receptor, beta  
52 IL13 Interleukin 13  
53 IL15 Interleukin 15  
54 IL16 Interleukin 16  
55 IL17A Interleukin 17A  
56 IL17C Interleukin 17C  
57 IL17F Interleukin 17F  
58 IL1A Interleukin 1, alpha  
59 IL1B Interleukin 1, beta  
60 IL1R1 Interleukin 1 receptor, type I  
61 IL1RN Interleukin 1 receptor antagonist  
62 IL21 Interleukin 21

63	IL27	Interleukin 27
64	IL3	Interleukin 3 (colony-stimulating factor, multiple)
65	IL33	Interleukin 33
66	IL5	Interleukin 5 (colony-stimulating factor, eosinophil)
67	IL5RA	Interleukin 5 receptor, alpha
68	IL7	Interleukin 7
69	IL8	Interleukin 8
70	IL9	Interleukin 9
71	IL9R	Interleukin 9 receptor
72	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
73	LTB	Lymphotoxin beta (TNF superfamily, member 3)
74	MIF	Macrophage migration inhibitory factor (glycosylation-inhibiting factor)
75	NAMPT	Nicotinamide phosphoribosyl transferase
76	OSM	Oncostatin M
77	SPP1	Secreted phosphoprotein 1
78	TNF	Tumor necrosis factor
79	TNFRSF	Tumor necrosis factor receptor superfamily, member 11b 11B
80	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
81	TNFSF11	Tumor necrosis factor (ligand) superfamily, member 11
82	TNFSF13	Tumor necrosis factor (ligand) superfamily, member 13
83	TNFSF13	Tumor necrosis factor (ligand) superfamily, member 13b B
84	TNFSF4	Tumor necrosis factor (ligand) superfamily, member 4
85	VEGFA	Vascular endothelial growth factor A

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**Supplementary Table 2. Primer sequences used for the qPCR validation analysis**

	<b>mRNA targets</b>	<b>forward</b>	<b>Reverse</b>	<b>Ref</b>
<b>Cytokines</b>	IL 13	GCTCCTCAATCCTCTCCTGT	GCAACTTCAATAGTCAGGTCCT	(37)
	IL 1 $\beta$	CTTCATTGCTCAAGTGTCTGAA	ACTTGTTGCTCCARARCCTGTC	(37)
	TNF $\alpha$	ACCATGAGCACTGAAAGCAT	AGATGAGGTACAGGCCCTCT	(37)
	IFN $\gamma$	TTGGGTCTCTTGGCTGTTA	AAATATTGCAGGCAGGACAA	(37)
	IL 15	GGATTTACCGTGGCTTTGAGTAATGAG	GCCTTCATGGTATTGGGAA	(38)
	IL 5	GCTTCTGCATTTGAGTTTGCTAGCT	TGGCCGTCAATGTATTTCTTTATTAAG	
	IL 17	TGAGCACATGCACCACATAC	TTAAGGTTGCGTAGAGTGAGTG	(39)
	VEGFA	TTGCCTTGCTGCTCTACCTCCA	GATGGCAGTAGCTGCGCTGATA	(40)
<b>Chemokines</b>	CCL 2	TAGGCTGGAGATCTACAAGAGG	AGTGCTTGAGGTGGTTGTGG	(41)
	CCL 11	GGCTGACCTCAAACCTCACAGAAA	ACATTCTGGCTTGGCATGGT	(41)
	CCL 17	CAAGCTCATCTGTGCAGACC	CGCCTGTAGTGCATAAAGAGTCC	(41)
	CCL 5	CACCACTCCCTGCTGCTT	ACACTTGGCGGTTCCCTTC	(41)
	CXCL 10	CTTCTGAAAGGTGACCAGCC	GTCGCACCTCCACATAGCTT	(41)
	CXCL 11	AACAGGAAGGTCACAGCCATAGC	TTTGTTCGCAGCCGTTACTCG	(41)
	CCL 22	AAGACAGTATCTGCTGCCAGG	GATCGGCACAGATATCTCGG	(41)
	CXCL13	CAG AAT CCT CTG GAA CTT GAG	CTT CCA GAC ATT CGG AGA CC	(42)

**Supplementary Table 3.** Primer sequences used for the qPCR analysis

<b>Gene</b>	<b>Forward primer Sequence (5'-3')</b>	<b>Reverse Primer sequence (5'-3')</b>	<b>Ref</b>
<b>Actinobacteria</b>	TACGGCCGCAAGGCTA	TCRTCCCCACCTTCCTCCG	(43)
<b>Bacteroidetes</b>	GGARCATGTGGTTTAATTCGATGAT	AGCTGACGACAACCATGCAG	(44)
<b>Firmicutes</b>	GGAGYATGTGGTTTAATTCGAAGCA	AGCTGACGACAACCATGCAC	(45)
<b>Proteobacteria</b>	TCGTCAGCTCGTGTYGTGA	CGTAAGGGCCATGATG	(44)



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**Supplementary Table 5A.** Pro-Inflammatory Chemokines and Cytokines Increased in baseline of both the groups (G1V1 vs G2V1)

<b>Group 1 (IC) visit 1 vs Group 2 (OC) visit 1</b>	
Chemokines	<b>40 ↑</b> (CXCL3, CXCL5, CXCL6, CXCL9, CXCR1, CXCR2, CCL1, CCL11, CCL13, CCL15, CCL16, CCL17, CCL2, CCL20, CCL22, CCR8, CSF2, CSF3, CX3CL1, CX3CR1, CXCL1, CXCL10, CXCL11, CXCL12, CXCL13, CXCL2, CCL23, CCL24, CCL3, CCL4, CCL5, CCL7, CCL8, CCR1, CCR2, CCR3, CCR4, CCR5, CCR 6, CD40LG)
Cytokines	<b>40 ↑</b> (IL15, IL16, IL17A, IL17C, IL17F, IL1A, IL1B, IL1R1, IL1RN, IL21, IL27, FASLG, IFNA2, IFNG, IL10RA, IL13, AIMP1, BMP2, NAMPT, OSM, SPP1, TNF, TNFRSF 11B, TNFSF 10, TNFSF 11, TNFSF13, TNFSF13B, TNFSF4, VEGFA, IL3, IL33, IL5, IL5RA, IL7, IL8, IL9, IL9R, LTA, LTB, MIF)

↑ Upregulation of cytokine/chemokine; ↓ downregulation of cytokine/chemokine. Group 1, IC; Group 2, OC; comparing baseline (V1) respectively.

43 **Supplementary Table 5B.** Comparison of Pro-Inflammatory Chemokines and Cytokines during the visits

	Group 1 (IC)			Group 2 (OC)			
	V1 vs V2	V1 vs V3	V1 vs V4	V1 vs V2	V1 vs V3	V1 vs V4	
Chemokines	1↓ (CCL 17)	3 ↓ (CCL17, CCL2, CCL23)	7 ↓ (C5, CCL17, CCL2, CCL23, CCL5, CXCL10, CXCL12)	2 ↓ (CXCL 10, CXCR2)	17 ↓ (CCL17, CCL2, CCL22, CCL24, CCL3, CCL5, CXCL9, CXCR1, CXCR2, CCL7, CCL8, CCR2, CX3CR1, CXCL10, CXCL11, CXCL13, CXCL5)	19 ↓ (CCL11, CCL17, CCL2, CCL20, CCL22, CCL23, CCL24, CCL3, CXCR1, CXCR2, CCL5, CCL8, CCR2, CCR5, CX3CL1, CXCL10, CXCL13, CXCL5)	44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60
	2 ↓ (FASLG, IL10 RB)	14 ↓ (IL9, L9R, LTB, TNFSF 10, IL1B, IL1R1, IL1RN, IL5, IL5RA, IL8, FASLG, IL10RB, IL13, IL1A)	21 ↓ (IL7, IL8, IL9, NAMPT, LTB, SPP1, IL 13, TNF, VEGFA, IL17C, IL1A, IL1B, IL1RN, IL21, IL5, IL5RA, FASLG, TNSF10, IFNA2, IL10RB, IL15)	2 ↓ (IFNG, IL13)	17 ↓ (IL1B, IL21, IL5, IL7, IL8, IL9R, OSM, TNF, VEGFA, BMP2, FASLG, IFNG, IL13, IL15, IL16, IL17A, IL1A)	26 ↓ (TNFSF11, TNFSF13, TNFSF4, VEGFA, IL16, IL17A, IL17E, IL1A, IL1B, IL21, IL33, IL5, IL7, IL8, IL9R, TNF, VEGFA, OSM, BMP2, FASLG, IFNA2, IFNG, IL13, IL15)	61 62 63 64 65 66 67 68 69 70 71 72 73

74 Upregulation of cytokine/chemokine; ↓ downregulation of cytokine/chemokine. Group 1, IC; Group 2, OC; comparing baseline (V1) to subsequent 3,6, and12  
75 month visits, V2, V3, and V4, respectively.



