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| **Supplementary Table 1. Chosen polymorphisms and corresponding gene.** Associated effect of polymorphism. | | | | | |
| GENE | GENETIC VARIANT | WILDTYPE/  VARIANT | NCBI GENE ID | PROTEIN FUNCTION | EFFECT OF VARIANT ALLELE |
| *CARD8* | rs2043211 | A/T | 22900 | CARD8 is part of the development of the inflammasome. | Decreased expression [1] and associated with worse disease course in early rheumatoid arthritis (RA) [2]. |
| *CD14* | rs2569190 | G/A | 929 | CD14 binds LPS and transport it to TLR4 | Homozygote variant increases CD14 level [3, 4]. |
| *IFNG* | rs2430561 | T/A | 3458 | IFN-γ is a pro- and anti-inflammatory cytokine. Increased levels of IFN-γ in synovial fluid IFN-γ is observed in patients with psoriatic arthritis (PsA) [5]. | Increased IFN-γ level [6, 7]. |
| *IFNGR1* | rs2234711 | T/C | 3459 | IFN-y receptor is a heterodimer of IFNGR1 and IFNGR2. Ligand binding activates JAK-STAT pathway. | Increased expression of IFNGR1 [8, 9]. |
| *IFNGR2* | rs17882748 | C/T | 3460 | C increases expression in haplotype with rs8126756T [10]. |
| *IFNGR2* | rs8126756 | T/C | 3460 | T increases expression in haplotype with rs17882748C [10]. |
| *IL1B* | rs1143623 | G/C | 3553 | IL-1β is activated by NFKB1 and works as a pro-inflammatory cytokine. | Decreased IL-1β level [11] but is only found in haplotypes with increased IL-1β transcription [12]. |
| *IL1B* | rs1143627 | T/C | 3553 | Decreased IL-1β expression [11, 13] but is only seen in haplotypes with increased IL-1β transcription [12]. |
| *IL1B* | rs4848306 | G/A | 3553 | Decreased IL-1β transcription [11-13]. |
| *IL1RN* | rs4251961 | T/C | 3557 | IL-1RA works by binding to the IL-1 receptor and thereby inhibiting IL-1β signalling. | Decreased IL-1RA level [14, 15]. |
| *IL4R* | rs1805010 | A/G | 3566 | IL-4 binds to the IL-4 receptor and significantly inhibits IL-17 production | Increased IL-17 level [16]. |
| *IL6* | rs10499563 | T/C | 3569 | IL-6 is activated by NFKB1 and works as a pro- and anti-inflammatory cytokine. | Decreased expression of IL-6 [17]. |
| *IL6R* | rs4537545 | C/T | 3570 | IL-6 binds to the IL-6 receptor and initiates a kinase cascade. | Homozygote variant increases IL-6r and IL-6 levels [18]. |
| *IL10* | rs1800872 | C/A | 3586 | IL-10 is a regulatory cytokine capable of inhibiting pro-inflammatory cytokines such as IFN-γ and TNF-α. IL-10 is activated by NFKB1. | Increased IL-10 expression [19]. |
| *IL10* | rs3024505 | C/T | 3586 | Unknown function. Associated with Cohn’s disease (CD) and ulcerative colitis (UC) [20-22]. |
| *IL12B* | rs3212217 | G/C | 3593 | IL-12-p40 (B) serves as a subunit of interleukin 12 and 23. | Increased IL12B level [23]. |
| *IL12B* | rs6887695 | G/C | 3593 | Unknown [24] [25]. Associated with psoriasis [26] and CD [27]. |
| *IL12RB1* | rs401502 | C/G | 3594 | IL12RB1 work as a shared subunit of IL-12 receptor and IL-23. | Reduced IL-12p40 level [28]. |
| *IL17A* | rs2275913 | G/A | 3605 | IL-17A is a pro-inflammatory cytokine and a potent mediator in delayed type reactions. | Increased IL-17A expression [29]. |
| *IL18* | rs187238 | G/C | 3606 | IL-18 is a pro-inflammatory cytokine, which feedback activates IFN-γ. IL-18 is known to enhance the production of IL-17, TNF-α, and IL-1β. | Reduced IL-18 level [30] and expression [31]. |
| *IL18* | rs1946518 | G/T | 3606 | TT reduces IL-18 level [30, 32] and expression [31].  Haplotype with rs1946518G and rs187238G increases transcription [33, 34]. |
| *IL23R* | rs11209026 | G/A | 14233 | IL-23 binds to the IL-23 receptor and induces production of IL-17. | Decreased production of IL-17 [35] and is associated with psoriasis [26], CD [36], and UC [20]. |
| *JAK2* | rs12343867 | T/C | 3717 | JAK2 is a kinase, which interacts with numerous membrane receptors including IFNGR, IL12R, and IL23R. | Reduced expression of JAK2 [37]. |
| *LY96 (MD2)* | rs11465996 | C/G | 23643 | MD2 is involved in binding of LPS to the TLR4 complex. | Increased LY96 (MD2) and TNF-α levels [38]. |
| *MAP3K14 (NIK)* | rs7222094 | T/C | 9020 | NIK binds to TRAF2 and work as a central kinase in the non-canonical NFKB pathway. | Homozygote variant decreases CXCL10 protein levels [39]. |
| *NFKB1* | rs28362491 | ins/del | 4790 | NFκB1 (p50) is a transcription factor. The p50 subunit of NFκB can both act pro-inflammatory as part of the p50/p65 complex and as p50 homodimer it can act anti-inflammatory [40]. | Del decreases p50 subunit expression [41]. |
| *NFKBIA* | rs696 | G/A | 4792 | NFκBIα (IκBα) is an inhibitor of NFκB1 | Increased NFκBIα expression [42]. |
| *NLRP1* | rs2670660 | A/G | 22861 | NLRP1 is part of the NLRP1 inflammasome and is central in innate immunity and inflammation. Activation of the inflammasome leads to processing and release of IL-1β and IL-18. | Reduced NLRP1 transcription [43]. |
| *NLRP1* | rs878329 | G/C | 22861 | C reduced mRNA levels  GG associated with RA [44]. |
| *NLRP3* | rs10754558 | C/G | 114548 | NLRP3 is part of the NLRP3 inflammasome complex and is central in innate immunity and inflammation. Activation of the inflammasome leads to processing and release of IL-1β and IL-18. | Increased expression and mRNA stability [45]. |
| *NLRP3* | rs4612666 | C/T | 114548 | Decreased expression [46]. |
| *PPARG* | rs1801282 | C/G | 5468 | PPARγ is a transcription factor | Amino acid substitution and decreased PPARg mRNA level, but increased MyD88, TLR4, TLR5, TLR9, P65 and TNF-α mRNA levels [47].  C is associated with PsA [48]. |
| *PTPN22* | rs2476601 | G/A | 26191 | PTPN22 is involved in regulation of multiple signalling pathways associated with inflammation. | A decreases TNF-α level in serum [49].  G associated with CD [36]. |
| *SUMO4* | rs237025 | T/C | 387082 | SUMO4 modifies IκBα, which leads to negative regulation of NFκB transcriptional activity. | Increased NFκB1 expression [50]. |
| *TBX21* | rs17250932 | T/C | 30009 | TBX21 works as a transcription factor that controls IFN-γ expression. | Reduced TBX21 transcription. Reduced T-bet (TBX21) and IFN-γ level and increased IL-4 level [51]. |
| *TGFB1* | rs1800469 | C/T | 7040 | TGF-β1 is a regulatory cytokine which can inhibit the secretion and activity of many other cytokines including IFN-γ and TNF-α. | Increased expression [52]. |
| *TIRAP* | rs8177374 | C/T | 114609 | TIRAP is an adapter molecule which is involved in TLR4 signalling. | Increased TNF-α, IL-6, and IFN-γ levels [53]. |
| *TLR1* | rs4833095 | T/C | 7096 | TLRs are important in pathogen recognition and activation of innate immunity and activate inflammation through the canonical NFKB pathway. | Increased TLR1 level [54]. |
| *TLR2* | rs11938228 | C/A | 7097 | See above | Unknown [55] |
| *TLR2* | rs1816702 | C/T | 7097 | See above | Increased receptor level [56] |
| *TLR2* | rs3804099 | T/C | 7097 | See above | Decreased TNF-α, IL-1β, and IL-6 levels [57] |
| *TLR2* | rs4696480 | A/T | 7097 | See above | Unknown [55] |
| *TLR4* | rs12377632 | T/C | 7099 | See above | Unknown [55] |
| *TLR4* | rs1554973 | T/C | 7099 | See above | Unknown [55] |
| *TLR4* | rs5030728 | G/A | 7099 | See above | Unknown [55] |
| *TLR5* | rs5744168 | C/T | 7100 | See above | Decreased TNF-α, IL-1β, IL-6 levels [57] and inhibited TLR5 function [58]. |
| *TLR5* | rs5744174 | T/C | 7100 | See above | Decreased mRNA levels of IL-6 & IL-1β [59] increased production of CCL20 [60] and IFN-γ level [61] |
| *TLR9* | rs187084 | T/C | 54106 | See above | Decreased expression of TLR9 [62] |
| *TLR9* | rs352139 | G/A | 54106 | See above | Increased expression of TLR9 [62] |
| *TNF* | rs1800629 | G/A | 7124 | TNF-α is activated by NFKB1 and works as a pro-inflammatory cytokine. | Increased expression [63] |
| *TNF* | rs361525 | G/A | 7124 | Decreased expression [64], associated with psoriasis and PsA [65] |
| *TNFAIP3* | rs6927172 | C/G | 7128 | TNFAIP3 (A20) inhibits NFκB activation and TNF-α mediated apoptosis. | Increased expression [66] |
| *TNFRSF1A* | rs4149570 | G/T | 7132 | TNF-α binds to TNF receptor 1 (TNFR1) which leads to a kinase cascade initiation. | Increased expression [67] |

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