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| **Supplementary Table 1 – The Association between genetic ploymorphisms and disease status at baseline** | | | | | | | |
| **Gene** | **SNP**  **(minor allele)** | **Minor allele frequency** | | | | **OR PsD vs. Controls** | **OR PsA vs. PsC** |
| **PsD (N=328)** | **PsA**  **(N=78)** | **PsC**  **(N=250)** | **Controls (N=341)** |
| **TNFRSF9** | rs4908742 (\*A) | 38.4% | 41.3% | 37.5% | 34.8% | 1.17 (0.89, 1.51) | 1.17 (0.72, 1.89) |
| **IL-23R** | rs12044149 (\*T) | 25.9% | 31.1% | 24.2% | 24.4% | 1.08 (0.84, 1.39) | 1.41 (0.94, 2.13) |
| rs4655683 (\*A) | 36% | 42.6% | 33.8% | 32.5% | 1.17 (0.93, 1.47) | 1.46 (1.00, 2.12)\* |
| rs2201841 (\*G) | 38.8% | 34% | 40.3% | 34.4% | 1.21 (0.97, 1.52) | 0.76 (0.52, 1.12) |
| rs11209026 (\*A) | 3.2% | 1.3% | 3.8% | 6.8% | 0.45 (0.26, 0.77)\* | 0.34 (0.08, 1.48) |
| **PTPN22** | rs2476601 (\*A) | 5.5% | 3.6% | 6.1% | 12% | 0.43 (0.28, 0.66)\*\* | 0.57 (0.22, 1.52) |
| **LCE3A** | rs10888503 (\*C) | 38.1% | 48% | 34.8% | 37.2% | 1.04 (0.83, 1.30) | 1.73 (1.19, 2.50)\* |
| **REL** | rs13017599 (\*A) | 26% | 26% | 25.9% | 35.8% | 0.63 (0.50, 0.80)\*\* | 1.02 (0.67, 1.55) |
| **5q31** | rs715285 (\*G) | 41.5% | 44.6% | 40.6% | 50.6% | 0.69 (0.55, 0.87)\* | 1.18 (0.79, 1.76) |
| **IL-13** | rs1800925 (\*T) | 16.4% | 14.9% | 16.9% | 18.9% | 0.84 (0.63, 1.14) | 0.86 (0.50, 1.48) |
| rs484 (\*T) | 16.4% | 14.9% | 16.9% | 18.3% | 0.88 (0.66, 1.18) | 1.18 (0.73, 1.93) |
| **TNIP1** | rs146571698 (\*T) | 8.4% | 6.8% | 13.5% | 6.9% | 1.24 (0.79, 1.97) | 2.11 (1.02, 4.35)\* |
| **IL-12B** | rs2082412 (\*A) | 21.1% | 23.3% | 20.4% | 17.3% | 1.29 (0.98, 1.69) | 1.18 (0.77, 1.83) |
| **HLA-B\*39** | rs9468859 (\*A) | 1% | 1.4% | 0.9% | 1.3% | 0.75 (0.27, 2.12) | 1.59 (0.28, 8.75) |
| **HLA-C\*06** | rs887466 (\*A) | 34.4% | 33.8% | 34.6% | 39.8% | 0.79 (0.63, 1)\* | 0.96 (0.64, 1.44) |
| **HLA-C\*12** | rs3130457 (\*C) | 26.3% | 25.3% | 26.6% | 24.1% | 1.12 (0.87, 1.44) | 0.93 (0.61, 1.43) |
| **HLA-C\*12** | rs3869115 (\*G) | 4.8% | 6.5% | 4.2% | 1.6% | 3.05 (1.52, 6.15)\*\* | 1.57 (0.72, 3.45) |
| **HLA-C\*12** | rs2248902 (\*A) | 25.2% | 20.5% | 27% | 24.3% | 1.04 (0.80, 1.38) | 0.70 (0.43, 1.13) |
| **HLA-C** | rs1050414 (\*G) | 19.4% | 14.9% | 20.8% | 10.4% | 2.06 (1.49, 2.86)\*\* | 0.67 (0.39, 1.13) |
| **HLA-B\*39** | rs2844603 (\*A) | 42.5% | 41.1% | 43% | 39.6% | 1.13 (0.90, 1.41) | 0.92 (0.63, 1.37) |
| **HLA-C** | rs12189871 (\*T) | 15.9% | 11.6% | 17.2% | 9.4% | 1.82 (1.29, 2.55)\*\* | 0.64 (0.36, 1.13) |
| **HLA-C** | rs12191877 (\*T) | 21% | 15.3% | 22.9% | 11.9% | 1.97 (1.45, 2.68)\*\* | 0.61 (0.37, 1.01) |
| **HLA-C** | rs13214872 (\*G) | 21.5% | 16.7% | 23% | 11.4% | 2.13 (1.57, 2.89)\*\* | 0.67 (0.41, 1.09) |
| **HLA-C\*06** | rs2894207 (\*C) | 25.9% | 20.4% | 27.8% | 13.2% | 2.28 (1.69, 3.08)\*\* | 0.66 (0.41, 1.08) |
| **HLA-C** | rs4406273 (\*A) | 16.1% | 12% | 17.4% | 9.3% | 1.86 (1.33, 2.61)\*\* | 0.64 (0.37, 1.11) |
| **HLA-B\*08** | rs6457374 (\*C) | 17.1% | 17.8% | 16.9% | 26.7% | 0.57 (0.42, 0.75)\*\* | 1.06 (0.62, 1.82) |
| \*p<0.05, \*\*p<0.001, PsA – psoriatic arthritis, PsC – cutaneous psoriasis, PsD – psoriatic disease, SNP-single nucleotide polymorphism | | | | | | | |

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| **Supplementary Table 1 – The Association between genetic ploymorphisms and disease status at baseline (cont.)** | | | | | | | |
| **Gene** | **SNP**  **(minor allele)** | **Minor allele frequency** | | | | **OR PsD vs. Controls** | **OR PsA vs. PsC** |
| **PsD (N=328)** | **PsA**  **(N=78)** | **PsC**  **(N=250)** | **Controls (N=341)** |
| HLA-C | rs12212594 (\*C) | 9.6% | 8.3% | 10% | 7% | 1.4 (0.93, 2.12) | 0.81 (0.41, 1.63) |
| HLA-B\*08 | rs2844535 (\*G) | 27% | 31.3% | 25.7% | 25.4% | 1.09 (0.85, 1.40) | 1.32 (0.88, 1.97) |
| HLA-B\*27 | rs4349859 (\*A) | 4% | 4.1% | 3.9% | 4% | 1.11 (0.62, 1.97) | 1.03 (0.40, 2.64) |
| MICA | rs67841474 (\*G) | 39.6% | 40.9% | 39.3% | 47.3% | 0.73 (0.58, 0.92)\* | 1.07 (0.73, 1.56) |
| HLA-B\*39 | rs3131382 (\*T) | 3.6% | 3.6% | 3.6% | 8.6% | 0.40 (0.24, 0.67)\*\* | 0.98 (0.35, 2.72) |
| HLA-B\*38 | rs2734331 (\*G) | 4.7% | 5.6% | 4.4% | 2.7% | 1.77 (0.94, 3.31) | 1.26 (0.49, 3.28) |
| HLA-C\*12 | rs396960 (\*A) | 25.4% | 23.2% | 26.1% | 22.9% | 1.14 (0.88, 1.49) | 0.86 (0.55, 1.33) |
| HLA-B\*38 | rs3129944 (\*G) | 20% | 24.3% | 18.7% | 11.3% | 1.96 (1.44, 2.67)\*\* | 1.4 (0.90, 2.17) |
| TRAF3IP2 | rs33980500 (\*T) | 9.2% | 12.1% | 8.4% | 6.9% | 1.37 (0.91, 2.06) | 1.51 (0.82, 2.78) |
| TNFAIP3 | rs9321623 (\*T) | 47.9% | 43.7% | 49.2% | 51.3% | 0.87 (0.69, 1.10) | 0.80 (0.53, 1.20) |
| IL-23A | rs2066808 (\*G) | 6.3% | 5.3% | 6.7% | 7% | 0.90 (0.58, 1.40) | 0.77 (0.35, 1.72) |
| FBXL19 | rs10782001 (\*G) | 42.4% | 41.2% | 42.7% | 39.2% | 1.14 (0.91, 1.43) | 0.94 (0.64, 1.37) |
| TYK2 | rs34536443 (\*C) | 2.5% | 0.7% | 3% | 4.7% | 0.52 (0.28, 0.97)\* | 0.22 (0.02, 1.72) |
| ZNF816A | rs9304742 (\*C) | 35% | 33.1% | 35.6% | 34.1% | 1.04 (0.83, 1.31) | 0.89 (0.60, 1.32) |
| KIR2DS2 | rs587560 (\*T) | 31.6% | 32.4% | 31.3% | 29.8% | 1.14 (0.89, 1.44) | 1.05 (0.71, 1.56) |
| \*p<0.05, \*\*p<0.001  PsA – psoriatic arthritis, PsC – cutaneous psoriasis, PsD – psoriatic disease, SNP-single nucleotide polymorphism | | | | | | | |