

SUPPLEMENTARY TABLE1

Disease-association genes of RA confirmed by OMIM, Pubmed, and Malacards database.

ID	Gene	References (PubMed-PMID)
1	AIF1	17522098;18721278
2	BAT1	18381799
3	BAT2	10528792;15077289
4	BTLA	17024343
5	BTNL2	16690410;23364395
6	C5	19433411;24234752
7	CARD8	23088220
8	CCL2	25918734
9	CCL21	11994492;15832291;18794853
10	CCR2	25779331
11	CD244	18794858
12	CD79A	23340833
13	CDK6	18794853;25138370
14	CIITA	22513452
15	CLEC16A	19734133;19221398
16	COL11A2	15922184
17	COMP	24187101
18	CRP	25889630
19	CTLA4	20854658
20	CXCR3	21811993
21	CYP27B1	15296474
22	DDR2	17968949
23	DKFZp667F0711	18794853
24	EPAS1	12823854;24914685
25	FCRL3	24117236
26	FSTL1	21303509
27	HLA-A	11929590
28	HLA-DMB	11881821
29	HLA-DOA	12439622
30	HLA-DPB1	11929590
31	HLA-DQA1	15725578
32	HLA-DRA	11361223
33	HLA-DRB1	25919528;25832994
34	HLA-G	16916651

SUPPLEMENTARY TABLE1 (CONTINUE)

Disease-association genes of RA confirmed by OMIM, Pubmed, and Malacards database.

ID	Gene	References(PubMed-PMID)
35	HTRA1	16377621
36	IL10	25623518
37	IL12A	11409111;11981324;12847280;15719608
38	IL17A	25871515
39	IL17RA	18097068
40	IL1A	15931231
41	IL1B	18576312
42	IL1RN	18468936
43	IL2RA	11312391
44	IL2RB	11238664
45	IL6	24766460
46	IL6ST	20453842
47	KIF5A	18794853
48	LECT2	10857804
49	LTA	15457442
50	MEFV	23360841
51	MICA	11407684;15077289
52	MIF	23402792
53	MMEL1	18794853
54	MMP1	22776467
55	MMP13	21107991
56	MMP3	25147433
57	MMP8	19656031
58	NFKBIL1	17855452
59	NOD2	23352252;19180500
60	NOTCH4	14730600;23318300
61	PADI4	25562673
62	PSORS1C1	23769905
63	PTPN22	20498205
64	PTPRC	12147336;15018649
65	RUNX1	15142876;11792409
66	S100A12	25282581
67	S100A8	24574827
68	S100A9	24574827

SUPPLEMENTARY TABLE1 (CONTINUE)

Disease-association genes of RA confirmed by OMIM, Pubmed, and Malacards database.

ID	Gene	References(PubMed-PMID)
69	SAA1	17039310
70	SLC11A1	25856512
71	SLC22A4	25707686
72	SOD2	12590982;15266664;14687717
73	STAT4	20498205
74	TAGAP	20854658;23453471
75	TAP2	1300236;14749980;15336779
76	TLR2	24352680
77	TNFAIP3	20854658
78	TNFRSF1B	25850964
79	TNIP1	22542476
80	TNXB	10343159;20018002
81	VCAM1	19597294

SUPPLEMENTARY TABLE2

Disease-association genes of T1D, SLE and psoriasis integrated from OMIM, Pubmed and Malacards database.

T1D gene	SLE gene	psoriasis gene
ACP1, ADA, ADAR, AIF1, BAT2, BTNL2, C6orf25, CFB, CLEC16A, CLIC1, CSF1, CTLA4, CXCL1, CYP27B1, DKFZp667F0711, EGFL8, FOXP3, GAD2, GLIS3, HLA-A, HLA-B, HLA-DMB, HLA-DOA, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DQB2, HLA-DRA, HLA-DRB1, HNF1A, HSPA1B, IDDM2, IL2, IL2RA, IL2RB, IL3, IL7, ITPR3, KIR2DL5A, LTA, LY6G5B, MICA, MOG, MS H5, NCR3, NELFE, NFKBIL1, NOTCH4, OAS1, PTPN22, PTPRC, RUNX1, SLC30A8, SUMO4, TAP2, TNF, TNXB	ACE, ACP1, AIM2, ANXA5, APOE, APOH, ASS1, BANK1, BLK, BMP2, BMPR2, BTNL2, C1QA, C1R, C2, C3, C4A, C4B, C7, CALR, CASP3, CASP4, CAT, CCL2, CCR5, CD247, CD274, CD28, CD4, CD40, CD40LG, CD46, CD55, CD59, CD70, CD79A, CD80, CNBP, COMT, CORO1A, CR1, CR2, CREM, CRP, CSF3, CSNK2A1, CTLA4, CXCL13, CXCR3, CYP1A1, DEFB4A, DEK, DNASE1, DNMT1, DYT10, EIF2AK2, ELK1, EPSTI1, ETS1, F2, F3, F5, FAS, FASLG, FCER1G, FCGR2A, FCGR2B, FCGR2C, FCGR3A, FCGR3B, FCN3, FLII, FOXP3, FUT3, FUT4, FUT5, FUT6, FYB, GSTM1, GUSB, HIF1A, HIST1H1B, HLA-A, HLA-B, HLA-DMB, HLA-DPB1, HLA-DQA1, HLA-DQB1, HLA-DRA, HLA-DRB1, HLA-DRB5, HLA-G, HMG B1, HRAS, HRES1, HSP90AA1, HSP90AB1, HSPA1B, HSPA2, HSPA4, ICAM1, ICOS, IFI16, IFIH1, IFIT3, IFN1, IFNA1, IFNA2, IFNG, IGH, IKKBE, IL10, IL12A, IL15R A, IL16, IL17A, IL17F, IL18, IL18BP, IL1B, IL1R1, IL1RN, IL2, IL22, IL2RA, IL2RB, IL4, IL6, IL8, IRAK3, IRF5, ITGA2B, ITGA4, ITGAM, ITGAX, ITGB2, ITGB3, ITIH4, KLRG1, LAIR1, LBR, LILRB1, LMOD1, LSM2, LTA, LTF, LTK, LY9, MBL2, MDGA2, MECP2, MERTK, MET, MICA, MIF, MNDA, MTHFR, MUC16, NEGR1, NFIL3, NOS3, NOTCH1, NUCKS1, PDCD1, PDCD1LG2, PH YH, POLR1C, PRKCB, PRL, PRNP, P ROCR, PTPN22, PTPRC, PTPRT, PX	ABCC1, ABCG2, ACE, ACHE, ACTP1, ACTG1, ADA, ADAM17, ADAM33, ADCYAP1, ADCYAP1R1, ADIPOQ, ADORA3, ADRB2, ADSL, AGER, AGTR1, ALB, ALOX12, ALOX15B, ALOX5, ALOX5AP, AMBP, ANGPT1, ANGPT2, ANXA1, ANXA3, ANXA6, AOC3, AP1S3, APOA1, APOB, APOBEC1, APOBEC3A, APOBEC3B, APOBEC3C, APOE, AREG, ARG1, ATF6B, ATG16L1, ATIC, ATOD3, B3GAT1, BAK1, BANK1, BAX, BCL2, BCL2L1, BGLAP, BIRC5, BSG, C11orf30, C17orf51, C3, C4A, C4B, C5orf56, C6orf10, C6orf15, CADM2, CALCA, CAMP, CANX, CAPZB, CARD14, CASP1, CASP14, CASP3, CAST, CAT, CAV1, CCHCR1, CCL11, CCL17, CCL18, CCL2, CCL20, CCL21, CCL22, CCL27, CCL28, CCL3, CCL4, CCL4L1, CCL4L2, CCL5, CCND1, CCND2, CCND3, CCR10, CCR2, CCR4, CCR5, CCR6, CCR7, CD109, CD14, CD1A, CD1B, CD1C, CD1D, CD207, CD209, CD226, CD28, CD300A, CD300C, CD300E, CD300LB, CD300LD, CD300LF, CD34, CD36, CD4, CD40, CD40LG, CD48, CD55, CD58, CD59, CD69, CD79A, CD80, CD83, CD86, CD8A, CD99, CDH1, CDH13, CDH3, CDK2, CDKAL1, CDKN1A, CDSN, CEACAM4, CETP, CFB, CFLAR, CHAT, CHI3L1, CHRNA7, CIITA, CLDN1, CLDN4, CLDN5, CLDN7, C

	<p>K, RAB11FIP5, RAB4A, RASGRP1, RFX1, RNPC3, RPL5, RPLP0, RSL1D1, RUNX1, SELE, SELL, SELP, SELPLG, SERPINC1, SERPINE1, SIGIRR, SLAMF6, SLAMF7, SLC5A11, SLC6A4, SLEB3, SLEB4, SLEH1, SNRPB, SNRPN, SOD2, SPTAN1, SSB, ST3GAL4, STAT4, TAP1, TAP2, TGFB1, THBD, TLR9, TMPO, TNF, TNFAIP1, TNFAIP3, TNFRSF13B, TNFRSF13C, TNFRSF18, TNFRSF1B, TNFSF10, TNFSF13, TNFSF13B, TNFSF4, TNXB, TP53, TPO, TREX1, TRIM21, TRIM68, TRIM72, TROVE2, TYK2, VCAM1, XRCC5, XRCC6</p>	<p>LEC7A, CLIC1, CMA1, CNFN, CNR1, COG6, COMT, CP, CPS1, CPT1A, CRABP1, CRABP2, CREB1, CRH, CRHR1, CRLF2, CRP, CSF3, CSMD1, CST6, CSTA, CTLA4, CTSL, CX3CL1, CX3CR1, CXCL1, CXCL10, CXCL16, CXCL5, CXCL9, CXCR1, CXCR2, CXCR3, CXCR6, CYP1A1, CYP24A1, CYP26A1, CYP27B1, CYP2C19, CYP2S1, CYP4F8, CYSLTR2, DARC, DDX58, DEFB1, DEFB103B, DEFB4A, DHFR, DHRS2, DNTT, DPP4, DSC1, DSC2, DSG1, DST, DUT, DYT10, EDN1, EGF, EGFR, EIF2AK2, ELANE, ELN, ENG, EPAS1, ERAP1, ESD, EZR, F13A1, F2RL1, F8, FABP12, FABP5, FASLG, FBXL19, FCE R2, FCGR3A, FGA, FGB, FGF10, FGF2, FGF7, FGFR2, FGG, FKBP1A, FLG, FLG2, FLT1, FLT4, FN1, FNDC1, FOSL1, FOXP3, FPGS, FZD5, GATA3, GBA, GCG, GGH, GGT1, GJB2, GLI1, GLP1R, GPT, GSR, GSTM1, GSTT1, GUSB, GZMB, HAVCR2, HAX1, HBEGF, HCP5, HDAC1, HES1, HIF1A, HLA-A, HLA-B, HLA-C, HLA-DMA, HLA-DMB, HLA-DPB1, HLA-DQA1, HLA-DQA2, HLA-DQB1, HLA-DRB1, HLA-DRB3, HLA-DRB4, HLA-E, HLA-G, HLA-S, HMGB1, HMGB2, HMOX1, HMOX2, HP, HRH4, HSP90AA1, HSPA1A, HSPA4, HSPB1, HSPD1, HTR2A, ICAM1, ICAM3, ID1, IFI6, IFIH1, IFN1, IFNA1, IFNA2, IFNG, IFNK, IGF1, IGF1R, IGF2, IGFBP3, IGFBP7, IGHA1, IGHE, IKBKB, IL10, IL10RA, IL11, IL12A, IL12B, IL12RB1, IL12RB2, IL13, IL13RA1, IL15, IL15</p>
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		RA, IL17A, IL17B, IL17D, IL 17F, IL17RA, IL18, IL18R1, IL19, IL1A, IL1B, IL1R1, IL1RAPL2, IL1RN, IL2, IL20, IL20RA, IL20RB, IL21, IL22, IL22RA2, IL23A, IL23R, IL24, IL26, IL27, IL2RA, IL2RB, IL3, IL31, IL4, IL4R, IL5, IL6, IL6R, IL6ST, IL7, IL8, INPPL1, INS, IRF1, IRF2, IRF5, IRF7, ITGA1, ITGA3, ITGA4, ITGAL, ITGB1, ITGB2, ITLN1, IVL, JAK1, JAK2, JAK3, JUN, JUNB, JUND, KCNH7, KDR, KIAA0391, KIR2DL1, KIR2DL2, KIR2DL3, KIR2DL4, KIR2DL5A, KIR2DP1, KIR2DS1, KIR2DS2, KIR2DS3, KIR2DS4, KIR2DS5, KIR3DL1, KIR3DL2, KIR3DL3, KIR3DS1, KITLG, KLK11, KLK6, KLK7, KLK8, KLR C1, KLRD1, KPRP, KRIT1, KRT1, KRT10, KRT13, KRT14, KRT15, KRT16, KRT17, KRT18, KRT5, KYNU, LAMP3, LCE3A, LCE3B, LCE3C, LCE3D, LCE3E, LDR, LELP1, LEP, LGALS1, LGMN, LIF, LNPEP, LOC553103, LOR, LOX, LPA, LRIG1, LRIG2, LRIG3, LRP1, LRRC32, LTA, LTA4H, LTBR, LTF, LYN, LYNX1, MAD1L1, MAPK1, MAPK14, MAPK3, MASP2, MDM2, MFNG, MGST2, MICA, MICB, MIF, MIR125B1, MIR146A, MIR203A, MIR203B, MIR21, MIR210, MIR221, MIR222, MIR31, MIR492, M KI67, MMP1, MMP12, MMP19, MMP2, MMP3, MMP9, MPO, MRAP, MTHFR, MX1, NAGLU, NAMPT, NAT1, NAT2, NAT9, NCOA5, NDUFA5, NELL2, NF1, NFATC1, NFATC2, NFKB1, NFKB2, NFKBIA, NGF, NGFR, NLRP3, NME1, NO
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		D2, NOS2, NOS3, NOTCH1, NOTCH2, NOTCH3, NOTCH4, NPS, NQO1, NR1H2, NR1H3, NR3C1, NR4A2, OCLN, ODC1, OPRM1, OSM, OXA1L, P2RX7, PCNA, PDCD5, PDE4A, PDGFRB, PF4, PGLYRP1, PHKA2, PI3, PLA2G2A, PLA2G6, PLAT, PLG, PNLIP, PNP, POLR2C, PON1, POU5F1, PPARA, PPARG, PPARG, PPBP, PPP3R1, PRDX2, PRINS, PRKCA, PRKCB, PRKCZ, PRKD1, PRL, PRO2268, PRSS22, PRSS27, PRTN3, PSAP, PSMA6, PSMB8, PSMB9, PSORS10, PSORS11, PSORS1C1, PSORS1C2, PSORS1C3, PSORS2, PSORS3, PSORS4, PSORS5, PSORS6, PSORS7, PSORS8, PSORS9, PTAFR, PTCH1, PTGS2, PTH, PTK2B, PTN22, PTPN6, PTTG1, PTX3, PYDC1, RAB10, RAB37, RAD50, RAF1, RARA, RARB, RARRES1, RARRES2, RARRES3, RARS, RBP4, REG3A, REL, RELA, RETN, REV3L, RFC1, RNASE3, RNASE7, RNF114, RNF125, RPL21P3, RPL3P2, RPS26, RPS6KA5, RUNX1, RXRA, RXRB, S100A1, S100A11, S100A12, S100A2, S100A4, S100A7, S100A7A, S100A8, S100A9, S100B, SATB1, SDC4, SDR16C5, SELE, SELP, SELPLG, SERPINA1, SERPINA12, SERPINA3, SERPINB1, SERPINB13, SERPINB2, SERPINB3, SERPINB5, SERPINB8, SERPINC1, SERPINE1, SERPINF1, SERPINF2, SFTPD, SHBG, SLC12A8, SLC17A5, SLC19A1, SLC22A4, SLC22A5, SLC2A1, SLC6A4, SLC7A1, SLC7A2, SLC9A3R1, SLC9A8, SLPI, SNAI1, SOCS1, SOCS3, SOD1, SO
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		D2, SPATA2, SPHK1, SPINK5, SPP1, SPPL2A, SPRR1A, SPRR1B, SPRR2A, SPRR2B, SPRR2D, SPRR2E, SPRR2F, SPRR2G, SPRR3, SPRR4, SSSCA1, SSTR5, STAT2, STAT3, STAT4, STK40, SUMO4, T, TAC1, TACR1, TAP1, TAP2, TARS, TBX21, TCF19, TEK, TF, TFAP2A, TGFA, TGF1, TGFBR1, TGIF1, TGM1, TGM3, THY1, TIMP1, TIMP2, TIMP3, TJP1, TLN1, TLR1, TLR2, TLR3, TLR4, TLR5, TLR8, TLR9, TMC6, TMPRSS11D, TNC, TNF, TNFAIP3, TNFRSF10A, TNFRSF10B, TNFRSF11A, TNFRSF11B, TNFRSF1A, TNFRSF1B, TNFRSF6B, TNFSF10, TNFSF11, TNIP1, TNXB, TOM1L1, TP53, TP63, TRA, TRAF3IP2, TRB, TSC1, TYK2, TYMS, TYRP1, UBC, UBE2D1, UBLCP1, USP8, VCAM1, VDR, VEGFA, VEGFC, VHL, VIM, VIP, VNN3, VTN, WASF5P, WNT5A, ZDHHC23, ZFYVE9, ZMIZ1, ZNF148, ZNF750
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SUPPLEMENTARY TABLE3

A total of 25 risk pathways in KEGG and 12 pathways in BioCarta for RA, T1D, SLE and psoriasis are identified by enrichment analysis.

Disease	KEGG pathway	Benjamini <i>p</i>-value	BioCarta pathway	Benjamini <i>p</i>-value
RA	1.hsa04940:Type I diabetes mellitus	6.48E-12	1.h_inflamPathway:Cytokines and Inflammatory Response	3.19E-04
	2.hsa05332:Graft-versus-host disease	6.02E-11	2.h_cytokinePathway:Cytokine Network	7.11E-04
	3.hsa05330:Allograft rejection	7.27E-10		
	4.hsa05320:Autoimmune thyroid disease	1.58E-08		
	5.hsa04612:Antigen processing and presentation	6.65E-08		
	6.hsa04060:Cytokine-cytokine receptor interaction	1.86E-07		
	7.hsa05310:Asthma	2.48E-06		
	8.hsa04672:Intestinal immune network for IgA production	3.01E-06		
	9.hsa04514:Cell adhesion molecules (CAMs)	3.29E-06		
	10.hsa05416:Viral myocarditis	3.16E-05		
	11.hsa04621:NOD-like receptor signaling pathway	1.59E-04		
	12.hsa05322:Systemic lupus erythematosus	2.38E-04		
SLE	1.hsa05330:Allograft rejection	6.39E-21	1.h_asbcellPathway:Antigen Dependent B Cell Activation	7.76E-10
	2.hsa04672:Intestinal immune network for IgA production	5.76E-19	2.h_inflamPathway:Cytokines and Inflammatory Response	5.08E-08
	3.hsa05320:Autoimmune thyroid disease	1.14E-18	3.h_cytokinePathway:Cytokine Network	1.20E-07
	4.hsa05322:Systemic lupus erythematosus	2.91E-18	4.h_blymphocytePathway:B Lymphocyte Cell Surface Molecules	1.65E-07
	5.hsa04060:Cytokine-cytokine receptor interaction	8.54E-18	5.h_granulocytesPathway:Adhesion and Diapedesis of Granulocytes	1.05E-06
	6.hsa04514:Cell adhesion molecules (CAMs)	7.54E-17	6.h_LairPathway:Cells and Molecules involved in local acute inflammatory response	1.05E-06
	7.hsa04940:Type I diabetes mellitus	6.97E-17	7.h_bbcellPathway:Bystander B Cell Activation	3.26E-06

SUPPLEMENTARY TABLE3 (CONTINUE)

A total of 25 risk pathways in KEGG and 12 pathways in BioCarta for RA, T1D, SLE and psoriasis are identified by enrichment analysis.

Disease	KEGG pathway	Benjamini <i>p-value</i>	BioCarta pathway	Benjamini <i>p-value</i>
SLE	8.hsa05332:Graft-versus-host disease	3.10E-16	8.h_th1th2Pathway:Th1/Th2 Differentiation	1.33E-05
	9.hsa04612:Antigen processing and presentation	8.70E-13	9.h_no2il12Pathway:NO2-dependent IL 12 Pathway in NK cells	3.77E-04
	10.hsa04610:Complement and coagulation cascades	3.06E-11		
	11.hsa04640:Hematopoietic cell lineage	1.65E-10		
	12.hsa05310:Asthma	2.89E-10		
	13.hsa05416:Viral myocarditis	4.44E-10		
	14.hsa04650:Natural killer cell mediated cytotoxicity	3.05E-07		
	15.hsa05340:Primary immunodeficiency	8.63E-06		
	16.hsa04660:T cell receptor signaling pathway	6.00E-05		
17.hsa04630:Jak-STAT signaling pathway	2.39E-04			
T1D	1.hsa04940:Type I diabetes mellitus	1.89E-15	1.h_inflamPathway:Cytokines and Inflammatory Response	7.57E-07
	2.hsa05332:Graft-versus-host disease	2.93E-14		
	3.hsa05330:Allograft rejection	5.45E-13		
	4.hsa04612:Antigen processing and presentation	3.47E-12		
	5.hsa05320:Autoimmune thyroid disease	1.52E-11		
	6.hsa05310:Asthma	1.49E-10		
	7.hsa04514:Cell adhesion molecules (CAMs)	1.79E-07		
	8.hsa05416:Viral myocarditis	2.23E-07		
	9.hsa04672:Intestinal immune network for IgA production	3.00E-07		

SUPPLEMENTARY TABLE3 (CONTINUE)

A total of 25 risk pathways in KEGG and 12 pathways in BioCarta for RA, T1D, SLE and psoriasis are identified by enrichment analysis.

Disease	KEGG pathway	Benjamini <i>p-value</i>	BioCarta pathway	Benjamini <i>p-value</i>
T1D	10.hsa05322:Systemic lupus erythematosus	3.61E-05		
	11.hsa04640:Hematopoietic cell lineage	1.80E-04		
psoriasis	1.hsa04060:Cytokine-cytokine receptor interaction	1.30E-48	1.h_inflamPathway:Cytokines and Inflammatory Response	5.31E-09
	2.hsa05332:Graft-versus-host disease	1.59E-21	2.h_cytokinePathway:Cytokine Network	1.16E-07
	3.hsa04630:Jak-STAT signaling pathway	1.92E-20	3.h_nktPathway>Selective expression of chemokine receptors during T-cell polarization	1.22E-07
	4.hsa05330:Allograft rejection	5.67E-19	4.h_th1th2Pathway:Th1/Th2 Differentiation	9.65E-07
	5.hsa04940:Type I diabetes mellitus	1.77E-16	5.h_LairPathway:Cells and Molecules involved in local acute inflammatory response	2.45E-05
	6.hsa04612:Antigen processing and presentation	3.57E-16	6.h_no2il12Pathway:NO2-dependent IL 12 Pathway in NK cells	1.39E-04
	7.hsa05320:Autoimmune thyroid disease	1.05E-12	7.h_asbcellPathway:Antigen Dependent B Cell Activation	5.55E-04
	8.hsa04514:Cell adhesion molecules (CAMs)	1.71E-12	8.h_IL12Pathway:IL12 and Stat4 Dependent Signaling Pathway in Th1 Development	5.50E-04
	9.hsa04672:Intestinal immune network for IgA production	2.73E-12	9.h_stemPathway:Regulation of hematopoiesis by cytokines	7.05E-04
	10.hsa04640:Hematopoietic cell lineage	2.99E-12		
	11.hsa04650:Natural killer cell mediated cytotoxicity	8.31E-12		
	12.hsa04620:Toll-like receptor signaling pathway	1.25E-11		
	13.hsa04062:Chemokine signaling pathway	8.62E-11		
	14.hsa05310:Asthma	1.50E-10		
	15.hsa05200:Pathways in cancer	2.11E-10		
	16.hsa05416:Viral myocarditis	2.08E-08		
	17.hsa04621:NOD-like receptor signaling pathway	1.95E-07		

SUPPLEMENTARY TABLE3 (CONTINUE)

A total of 25 risk pathways in KEGG and 12 pathways in BioCarta for RA, T1D, SLE and psoriasis are identified by enrichment analysis.

Disease	KEGG pathway	Benjamini <i>p-value</i>	BioCarta pathway	Benjamini <i>p-value</i>
psoriasis	18.hsa05219:Bladder cancer	1.40E-06		
	19.hsa05215:Prostate cancer	3.68E-05		
	20.hsa04210:Apoptosis	8.61E-05		
	21.hsa04660:T cell receptor signaling pathway	2.82E-04		
	22.hsa04920:Adipocytokine signaling pathway	2.71E-04		

SUPPLEMENTARY TABLE4

Association rule mining result.

Body	==>	Head	Support (%)	Confidence (%)	Correlation (%)
RA == 1	==>	T1D ==1	63.41	64.20	80.12
RA == 1	==>	SLE ==1	58.54	59.26	76.98
RA == 1	==>	Psoriasis==1	35.90	48.28	69.48