

Table 1.1 – HLA-A allele distribution – PsA vs. Psoriasis and PsA vs. Healthy controls

Allele	PsA (N=712)	Psoriasis (N=334)	OR	P value	FDR- p	Control (N=713)	OR	P value	FDR-p
A*01	233 (32.7%)	124 (37.1%)	0.82	0.16	0.65	229 (31.9%)	1.03	0.79	0.85
A*02	404 (56.7%)	185 (56.5%)	1.05	0.69	0.88	359 (50%)	1.30	0.01	0.04
A*03	141 (19.8%)	69 (20.6%)	0.95	0.74	0.88	196 (27.3%)	0.65	0.0008	0.01
A*11	84 (11.8%)	32 (9.6%)	1.26	0.28	0.65	85 (10.9%)	1.1	0.52	0.81
A*23	15 (2.1%)	8 (2.4%)	0.87	0.76	0.89	30 (4.2%)	0.49	0.02	0.05
A*24	117 (16.4%)	41 (12.2%)	1.41	0.08	0.65	92 (12.8%)	1.33	0.05	0.11
A*25	19 (2.6%)	14 (4.2%)	0.63	0.19	0.65	28 (3.9%)	0.67	0.19	0.33
A*26	63 (8.8%)	23 (6.9%)	1.31	0.28	0.65	36 (5.0%)	1.83	0.004	0.03
A*28 [^]	39 (5.5%)	21 (6.3%)	0.97	0.53	0.88	62 (8.6%)	0.63	0.02	0.05
A*29	49 (6.9%)	21 (6.3%)	1.10	0.72	0.88	69 (9.6%)	0.69	0.06	0.12
A*31	33 (4.6%)	16 (4.6%)	0.98	0.92	0.92	34 (4.7%)	0.97	0.92	0.92
A*32	41 (5.8%)	21 (6.3%)	0.91	0.73	0.88	44 (6.1%)	0.93	0.76	0.85
A*33	20 (2.8%)	16 (4.8%)	0.57	0.10	0.65	18 (2.5%)	1.1	0.72	0.85
A*66	6 (0.8%)	3 (1.1%)	0.93	0.92	0.92	8 (1.1%)	0.75	0.60	0.84

Table 1.2 – HLA-B allele distribution – PsA vs. Psoriasis and PsA vs. Healthy controls

Allele	PsA (N=712)	Psoriasis (N=335)	OR	P	FDR – p	Control (N=712)	OR	P value	FDR-p
B*07	119 (16.7%)	57 (17.1%)	0.97	0.89	0.95	186 (25.8%)	0.57	2x10⁻⁵	<0.0001
B*08	159 (22.2%)	54 (16.1%)	1.48	0.02	0.12	174 (24.2%)	0.89	0.36	0.63
B*13	58 (8.1%)	44 (13.1%)	0.58	0.01	0.08	34 (4.7%)	1.78	0.009	0.03
B*14	53 (7.4%)	36 (10.8%)	0.66	0.07	0.24	61 (8.5%)	0.86	0.46	0.64
B*18	58 (8.1%)	18 (5.4%)	1.55	0.1	0.27	57 (7.9%)	1.02	0.88	0.88
B*27	137 (19.2%)	15 (4.5%)	5.07	2*10⁻¹⁰	<0.0001	52 (7.2%)	3.05	2x10⁻¹¹	<0.0001
B*35	95 (13.3%)	31 (9.3%)	0.82	0.28	0.51	122 (16.9%)	0.75	0.05	0.11
B*37	18 (2.5%)	15 (4.5%)	0.55	0.09	0.27	23 (3.2%)	0.78	0.44	0.64
B*38	94 (13.2%)	31 (9.3%)	1.48	0.07	0.24	18 (2.5%)	5.90	5x10⁻¹⁴	<0.0001
B*39	44 (6.2%)	16 (4.8%)	1.31	0.36	0.51	22 (3.1%)	2.08	0.005	0.03
B*41	14 (1.9%)	9 (2.6%)	0.72	0.45	0.57	10 (1.4%)	1.42	0.39	0.63
B*44	152 (21.3%)	81 (24.2%)	0.85	0.29	0.51	185 (25.7%)	0.78	0.05	0.10
B*45	4 (0.6%)	4 (1.2%)	0.46	0.29	0.51	7 (0.9%)	0.57	0.37	0.63
B*49	8 (1.1%)	7 (2.1%)	0.53	0.22	0.51	23 (3.2%)	0.34	0.007	0.03
B*50	20 (2.8%)	10 (3%)	0.94	0.87	0.94	9 (1.3%)	2.30	0.04	0.10
B*51	38 (5.3%)	22 (6.6%)	0.80	0.42	0.56	77 (10.7%)	0.47	0.0002	0.004
B*52	15 (2.1%)	4 (1.2%)	1.77	0.30	0.51	17 (2.4%)	0.88	0.74	0.77
B*55	20 (2.8%)	10 (3%)	0.93	0.87	0.94	24 (3.3%)	0.87	0.55	0.64
B*57	102 (14.3%)	75 (22.4%)	0.58	0.001	0.01	60 (8.3%)	1.83	0.0004	0.004
B*58	8 (1.1%)	4 (1.2%)	0.93	0.91	0.94	11 (1.5%)	0.73	0.50	0.64
B*4001	44 (6.2%)	16 (4.8%)	1.31	0.36	0.51	72 (10%)	0.59	0.008	0.03
B*4002	16 (2.2%)	4 (1.2%)	1.89	0.24	0.51	20 (2.8%)	0.80	0.52	0.64
B*1501	48 (6.4%)	28 (8.4%)	0.79	0.34	0.51	71 (9.8%)	0.65	0.03	0.09
B*1517	13 (1.8%)	6 (1.7%)	1.01	0.97	0.97	7 (1.0%)	1.88	0.17	0.32
B*1509/10	8 (1.1%)	9 (2.7%)	0.41	0.06	0.24	10 (1.4%)	0.80	0.63	0.69

Table 1.3 – HLA-C allele distribution – PsA vs. Psoriasis and PsA vs. Healthy controls

Allele	PsA (N=710)		Psoriasis (N=334)		OR	P value	FDR-p	Control (N=708)		OR	P value	FDR-p
C*01	76	(10.7%)	15	(4.5%)	2.55	0.0009	0.0036	42	(5.8%)	1.92	0.001	0.002
C*02	90	(12.7%)	19	(5.7%)	2.41	0.0006	0.003	49	(6.7%)	1.97	0.0002	0.001
C*03	112	(15.8%)	54	(16.2%)	0.97	0.87	0.88	161	(22.5%)	0.64	0.001	0.002
C*04	115	(16.2%)	61	(18.3%)	0.86	0.41	0.63	147	(20.6%)	0.76	0.03	0.05
C*05	111	(15.6%)	47	(14.1%)	1.13	0.51	0.65	101	(14.2%)	1.12	0.43	0.45
C*06	195	(27.5%)	147	(44%)	0.48	8*10⁻⁸	<0.0001	129	(18.1%)	1.71	2x10⁻⁵	<0.0001
C*07	330	(46.5%)	131	(39.2%)	1.34	0.03	0.09	404	(56.6%)	0.66	0.0001	0.001
C*08	53	(7.6%)	36	(10.8%)	0.66	0.07	0.16	61	(8.5%)	0.86	0.45	0.45
C*12	147	(20.7%)	56	(16.8%)	1.29	0.13	0.28	73	(10.2%)	2.29	4x10⁻⁸	<0.0001
C*15	21	(2.9%)	11	(3.3%)	0.89	0.76	0.84	43	(6.0%)	0.48	0.005	0.01
C*16	41	(5.8%)	26	(7.8%)	0.72	0.21	0.37	61	(8.5%)	0.65	0.04	0.05
C*17	15	(2.1%)	8	(2.4%)	0.87	0.77	0.84	10	(1.4%)	1.51	0.31	0.38

Table 1.4 – HLA-DRB1 allele distribution – PsA vs. Psoriasis and PsA vs. Healthy controls

Allele	PsA (N=712)	Psoriasis (N=335)	OR	P value	FDR -p	Control (N=711)	OR	P value	FDR -p
DRB1*01	182 (25.5%)	68 (20.3%)	1.34	0.06	0.19	132 (18.4%)	1.52	0.001	0.007
DRB1*03	167 (23.4%)	55 (16.4%)	1.56	0.009	0.06	185 (25.8%)	0.88	0.29	0.53
DRB1*04	211 (29.6%)	96 (28.6%)	1.04	0.75	0.82	229 (31.9%)	0.89	0.33	0.53
DRB1*07	216 (30.3%)	139 (41.5%)	0.62	0.0004	0.005	202 (28.2%)	1.11	0.37	0.53
DRB1*08	35 (4.9%)	21 (6.3%)	0.77	0.36	0.78	36 (5.0%)	0.97	0.92	0.92
DRB1*09	11 (1.5%)	4 (1.2%)	1.29	0.65	0.82	14 (1.9%)	0.78	0.55	0.69
DRB1*10	11 (1.5%)	4 (1.2%)	1.29	0.65	0.82	13 (1.8%)	0.84	0.69	0.74
DRB1*11	89 (12.5%)	47 (14%)	0.87	0.48	0.82	126 (17.6%)	0.67	0.007	0.03
DRB1*12	35 (4.9%)	15 (4.5%)	1.10	0.76	0.82	21 (2.9%)	1.71	0.05	0.13
DRB1*13	142 (19.9%)	65 (19.4%)	1.02	0.84	0.84	151 (21.1%)	0.93	0.59	0.69
DRB1*14	60 (7%)	17 (5.0%)	1.41	0.23	0.59	41 (5.7%)	1.24	0.31	0.53
DRB1*15	134 (18.8%)	67 (20%)	0.92	0.64	0.82	190 (26.5%)	0.64	0.0005	0.006
DRB1*16	40 (5.6%)	10 (3.0%)	1.93	0.06	0.19	24 (3.4%)	1.71	0.04	0.13

Table 1.5 – HLA-DQ allele distribution – PsA vs. Psoriasis and PsA vs. Healthy controls

Allele	PsA (N=712)	Psoriasis (N=335)	OR	P value	FDR - p	Control (N=711)	OR	P value	FDR - p
DQB1*02	292 (41.1%)	142 (42.4%)	0.94	0.68	0.91	303 (42.3%)	0.95	0.64	0.65
DQB1*0301	201 (28.3%)	107 (31.9%)	0.84	0.22	0.61	238 (33.2%)	0.79	0.04	0.09
DQB1*0302	141 (19.8%)	64 (19.1%)	1.04	0.78	0.91	149 (20.8%)	0.94	0.65	0.65
DQB1*0303	100 (14.1%)	62 (18.5%)	0.72	0.06	0.42	74 (10.3%)	1.42	0.03	0.09
DQB1*0402	29 (4.1%)	20 (6.0%)	0.67	0.17	0.59	33 (4.6%)	0.88	0.62	0.65
DQB1*0501	183 (25.7%)	70 (20.9%)	1.31	0.09	0.42	143 (19.9%)	1.39	0.009	0.05
DQB1*0502	42 (5.9%)	11 (3.3%)	1.85	0.07	0.42	25 (3.5%)	1.73	0.03	0.09
DQB1*0503	47 (6.6%)	17 (5.1%)	1.32	0.33	0.66	39 (5.4%)	1.23	0.35	0.52
DQB1*0601	15 (2.1%)	7 (2.1%)	1.0	0.98	0.99	18 (2.5%)	0.83	0.61	0.65
DQB1*0602	121 (17%)	57 (17%)	1.0	0.99	0.99	177 (24.7%)	0.63	0.0004	0.004
DQB1*0603	85 (11.9%)	38 (11.3%)	1.06	0.77	0.91	74 (10.3%)	1.17	0.32	0.52
DQB1*0604	40 (5.6%)	15 (4.5%)	1.27	0.44	0.77	49 (6.8%)	0.83	0.35	0.52
DQB1*0609	9 (1.3%)	3 (0.9%)	1.42	0.59	0.91	7 (0.9%)	1.30	0.60	0.65

Table 4.1 – Odds ratios comparing HLA allele frequencies in Axial PsA (N=255) vs. PsC (N=334) using logistic regression analysis

Allele	Univariate analysis			Multivariate analysis (reduced model)		
	OR	95% CI	P value	OR	95% CI	P Value
HLA-B*08	1.75	1.17-2.64	0.007	2.46	1.59-3.79	<0.0001
HLA-B*27	7.34	4.09-13.23	<0.0001	9.08	4.95-16.65	<0.0001
HLA-B*38	1.80	1.09-2.97	0.02	2.55	1.50-4.34	0.0006
HLA-B*39	1.86	0.96-3.62	0.07	2.51	1.25-5.01	0.009
HLA-B*07	0.86	0.56-1.35	0.54			
HLA-B*13	0.57	0.32-0.97	0.04			
HLA-B*14	0.59	0.32-1.07	0.08			
HLA-B*18	0.94	0.45-1.94	0.85			
HLA-B*35	0.75	0.47-1.21	0.24			
HLA-B*37	0.51	0.19-1.33	0.17			
HLA-B*41	0.43	0.11-1.59	0.20			
HLA-B*44	0.72	0.48-1.07	0.10			
HLA-B*50	0.91	0.34-2.42	0.84			
HLA-B*51	0.82	0.41-1.63	0.56			
HLA-B*52	1.97	0.55-7.06	0.29			
HLA-B*55	0.64	0.22-1.91	0.42			
HLA-B*57	0.71	0.46-1.07	0.10			
HLA-B*58	1.30	0.32-5.27	0.71			
HLA-B*4001	0.89	0.41-1.49	0.76			
HLA-B*4002	1.97	0.55-7.06	0.29			
HLA-B*1501	0.58	0.29-1.14	0.11			
HLA-B*1517	1.08	0.33-3.59	0.89			
HLA-B*1509/10	0.14	0.02-1.12	0.06			
HLA-C*01	2.94	1.55-5.58	0.0009			
HLA-C*02	3.26	1.85-5.77	<0.0001			
HLA-C*03	0.69	0.43-1.11	0.13			
HLA-C*04	0.83	0.54-1.28	0.41			
HLA-C*05	0.85	0.52-1.37	0.49			
HLA-C*06	0.54	0.38-0.76	0.0005			
HLA-C*07	1.25	0.90-1.74	0.18			
HLA-C*08	0.63	0.35-1.13	0.12			
HLA-C*12	1.56	1.04-2.34	0.03			
HLA-C*15	0.83	0.32-2.17	0.70			
HLA-C*17	0.48	0.13-1.84	0.28			

Table 5.1 – Odds ratios comparing HLA allele frequencies in peripheral PsA (N=323) vs. PsC (N=334) using logistic regression analysis

Allele	Univariate analysis			Multivariate analysis (reduced model)		
	OR	95% CI	P value	OR	95% CI	P Value
HLA-B*08	1.51	1.04-2.29	0.03			
HLA-B*27	3.80	2.09-6.93	<0.0001	3.66	1.99-6.72	<0.0001
HLA-B*38	1.07	0.64-1.81	0.78			
HLA-B*39	0.90	0.43-1.87	0.77			
HLA-B*07	1.11	0.74-1.65	0.61			
HLA-B*13	0.60	0.36-0.99	0.048			
HLA-B*14	0.69	0.41-1.18	0.18			
HLA-B*18	1.47	0.78-2.75	0.22			
HLA-B*35	0.92	0.61-1.41	0.72			
HLA-B*37	0.40	0.15-1.05	0.06			
HLA-B*41	0.57	0.19-1.71	0.31			
HLA-B*44	0.97	0.68-1.39	0.90			
HLA-B*50	0.93	0.37-2.31	0.87			
HLA-B*51	0.79	0.41-1.51	0.47			
HLA-B*52	1.82	0.53-6.30	0.33			
HLA-B*55	1.03	0.42-2.52	0.93			
HLA-B*57	0.55	0.36-0.83	0.005			
HLA-B*58	1.03	0.25-4.17	0.96			
HLA-B*4001	1.66	0.87-3.18	0.12			
HLA-B*4002	1.83	0.53-6.30	0.33			
HLA-B*1501	0.92	0.52-1.61	0.76			
HLA-B*1517	1.03	0.33-3.24	0.95			
HLA-B*1509/10	0.68	0.24-1.94	0.47			
HLA-C*01	2.25	1.19-4.27	0.01			
HLA-C*02	1.64	0.89-2.98	0.11			
HLA-C*03	1.18	0.79-1.77	0.41			
HLA-C*04	0.94	0.63-1.40	0.76			
HLA-C*05	1.22	0.80-1.87	0.34			
HLA-C*06	0.46	0.33-0.64	<0.0001	0.47	0.34-0.66	<0.0001
HLA-C*07	1.47	1.07-1.99	0.015			
HLA-C*08	0.66	0.38-1.14	0.13			
HLA-C*12	1.04	0.69-1.56	0.84			
HLA-C*15	1.13	0.49-2.61	0.76			
HLA-C*17	0.64	0.21-1.97	0.43			

Table 6.1 – Odds ratios comparing HLA-B/HLA-C haplotype frequencies in PsA (N=710) to PsC (N=334) using logistic regression analysis

HLA-B/ HLA-C	Frequency		Linkage Disequilibriu D'	Univariate analysis			Multivariate analysis (Reduced model)		
	PsA	PsC		OR	95% CI	P value	OR	95% CI	P value
*18-*07	1.9%	0.6%	0.15	7.8	1.1-55.9	0.04	10.1	1.4-74.3	0.004
*27-*01	4.1%	0.7%	0.65	31.4	4.8-203.6	0.0003	41.1	6.4-266.1	<0.0001
*27-*02	4.9%	1.3%	0.69	15.5	3.7-64.5	0.0002	19.9	4.7-84.1	<0.0001
*38-*12	7.1%	4.8%	0.99	2.2	0.99-4.9	0.052	2.9	1.3-6.6	0.01
*08-*07	11.7%	8.5%	0.97	2.0	1.1-3.8	0.03	2.6	1.36-4.99	0.004
*57-*06	6.7%	11.4%	0.92	0.3	0.2-0.6	0.0004	0.5	0.3-0.9	0.03
*50-*06	1.4%	1.5%	1.00	0.9	0.2-4.1	0.87			
*35-*04	6.4%	7.5%	0.87	1.0	0.5-2.0	0.91			
*41-*17	0.9%	1.2%	0.91	0.6	0.1-3.4	0.54			
*44-*16	2.6%	3.9%	0.91	0.4	0.2-1.2	0.11			
*13-*06	4.2%	6.9%	1.00	0.3	0.2-0.8	0.009			
*18-*12	1.0%	1.6%	0.23	0.4	0.1-2.4	0.32			
*37-*06	1.3%	2.3%	1.00	0.4	0.1-1.4	0.14			
*39-*07	1.7%	1.0%	0.37	2.0	0.3-12.6	0.47			
*18-*05	1.1%	1.0%	0.24	2.3	0.3-16.2	0.42			
*39-*12	1.7%	1.4%	0.50	1.3	0.3-6.2	0.71			
*14-*08	3.8%	5.5%	0.98	0.5	0.2-1.1	0.08			
*62-*03	3.2%	3.6%	0.85	0.7	0.3-2.0	0.55			
*60-*03	3.1%	2.5%	1.00	1.6	0.5-4.7	0.43			
*44-*05	6.3%	6.4%	0.78	1.0	0.5-2.2	0.95			
*55-*03	1.2%	1.2%	0.80	1.0	0.2-5.5	0.99			
*35-*04	6.4%	7.5%	0.87	0.7	0.4-1.5	0.37			