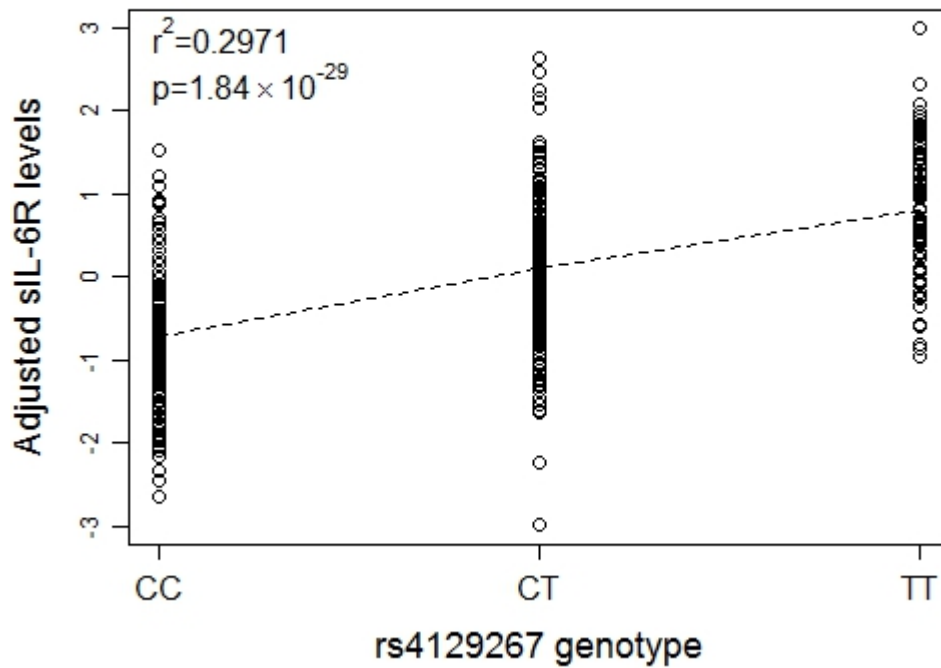


A new regulatory variant in the interleukin-6 receptor gene associates with asthma risk

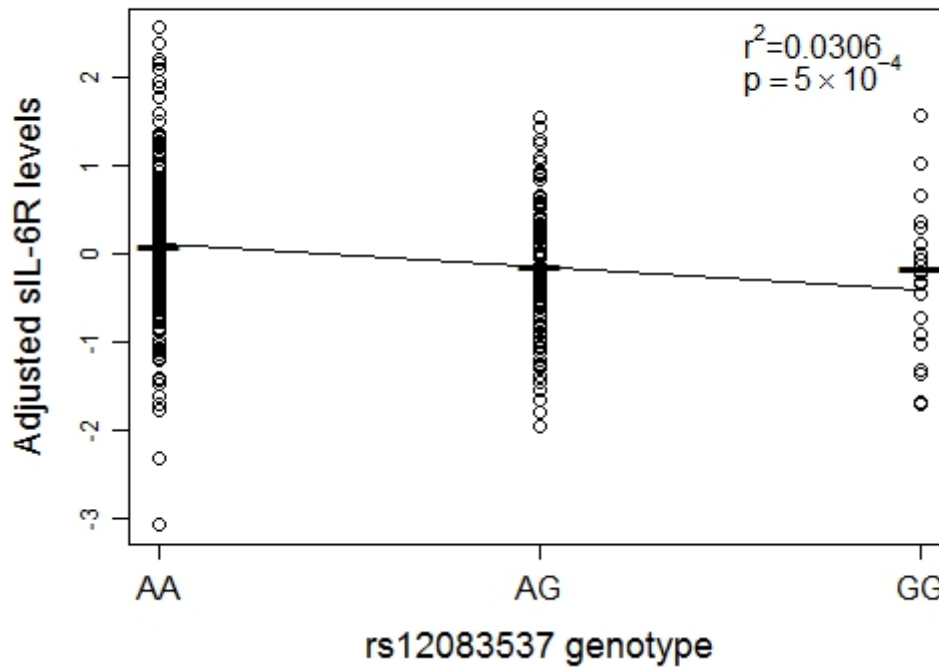
Supplementary information

Joana A. Revez, Lisa Bain, Brett Chapman, Joseph E. Powell, Rick Jansen, David L. Duffy, Joyce Y. Tung, AAGC collaborators, Brenda W. Penninx, Peter M. Visscher, Eco J.C. de Geus, Dorret I. Boomsma, David A. Hinds, Nicholas G. Martin, Grant W. Montgomery, Manuel A.R. Ferreira

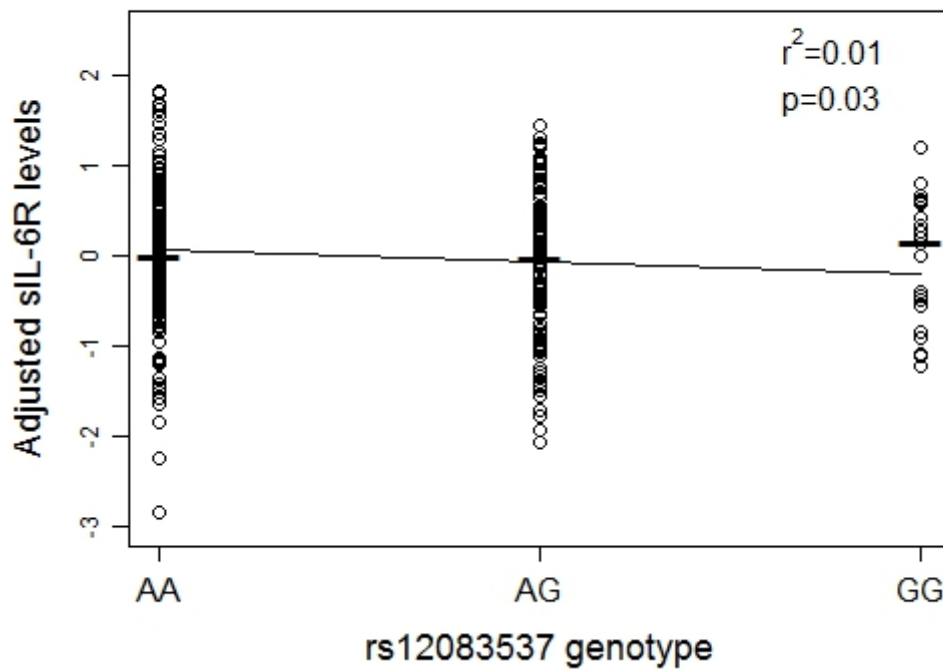
SUPPLEMENTARY FIGURES



Supplementary Figure 1. Association between sIL-6R serum levels (after adjusting for technical covariates) and rs4129267 genotype in the discovery cohort (N = 360). The association was tested using linear regression; the figure shows the proportion of variation in sIL-6R levels explained by rs4129267 (r^2), the association P -value (p) and the corresponding regression line.



Supplementary Figure 2. Association between sIL-6R serum levels (after adjusting for technical covariates and the effects of rs4129267) and rs12083537 genotype in the discovery cohort (N = 360). The association was tested using linear regression; the figure shows the proportion of variation in sIL-6R levels explained by rs12083537 (r^2), the association P -value (p) and the corresponding regression line.



Supplementary Figure 3. Association between sIL-6R serum levels (after adjusting for technical covariates and the effects of rs4129267) and rs12083537 genotype in the replication cohort (N = 354). The association was tested using linear regression; the figure shows the proportion of variation in sIL-6R levels explained by rs12083537 (r^2), the association P -value (p) and the corresponding regression line.

SUPPLEMENTARY TABLES

Supplementary Table 1. Demographics and clinical characteristics of 360 asthmatics included in the cohort used to discover novel SNP associations with sIL-6R serum levels.

rs4129267 genotype	CC	CT	TT	All
N	112	170	78	360
Eczema (% yes, no, unknown)	44.6,55.4,0	40.5,59.4,0.6	35.9,64.1,0	40.6,59.2,0.3
Atopy (% SPT+, SPT-, unknown)	63.4,21.4,15.2	71.2,14.7,14.1	66.7,12.8,20.5	67.8,16.4,15.8
Asthma onset (% ≤16, >16, unknown)	51.8,17,31.2	62.4,9.4,28.2	57.7,11.5,30.8	58.1,12.2,29.7
IgE, SD (IU/mL)	128.4,4.1	162.3,4.3	147.8,4.1	148.3,4.2
Eosinophils, SD (x10 ⁹ /L)	0.31,0.3	0.34,0.34	0.31,0.25	0.32,0.31
Family history (% yes, no, unknown)	90.2,9.8,0	92.9,7.1,0	88.5,11.5,0	91.1,8.9,0
Age (mean, SD, range)	27,13.9,7-69	26,14.7,7-71	28,14.6,8-73	27,14.4,7-73
Sex (% female)	52.7	55.9	51.3	53.9
Smoker ever (% yes, no, unknown)	24.1,75.9,0	21.8,77.6,0.6	28.2,70.5,1.3	23.9,75.6,0.6
Smoker current (% yes, no, unknown)	14.3,38.4,47.3	6.5,52.9,40.6	12.8,47.4,39.7	10.3,47.2,42.5
Medication ever (% yes, no, unknown)	97.3,2.7,0	96.5,3.5,0	97.4,2.6,0	96.9,3.1,0
Medication current (% yes, no, unknown)	78.6,21.4,0	82.4,17.6,0	80.8,19.2,0	80.8,19.2,0
Inhaled steroids current (% yes, no, unknown)	40.2,35.7,24.1	50.6,24.7,24.7	39.7,29.5,30.8	45,29.2,25.8
Inhaled steroids daily (% yes, no, unknown)	21.4,54.5,24.1	22.4,52.9,24.7	23.1,46.1,30.8	22.2,52.0,25.8
Hospital ever (% yes, no, unknown)	23.2,74.1,2.7	29.4,66.5,4.1	29.5,66.7,3.8	27.5,68.9,3.6
sIL-6R levels, SD (ng/mL)	54.99,19.92	74.17,25.66	93.99,28.68	72.5,28.4

Supplementary Table 2. Association results between rs4129267-adjusted sIL-6R serum levels and 471 *IL6R* SNPs in the discovery cohort (N = 360). The six independent ($r^2 < 0.1$) associated SNPs highlighted in yellow are also included in **Supplementary Table 3**.

Position, bp	SNP	Imputed	Info	Effect allele	Other allele	Effect allele freq	Beta	SE	P-value	LD association cluster
154381103	rs12083537	Yes	0.949	G	A	0.217	-0.2579	0.0731	0.00048	1
154382049	rs1386821	No	1.000	G	T	0.205	-0.2247	0.0729	0.00222	1
154351995	rs138227751	Yes	0.893	A	G	0.075	0.3218	0.1160	0.00582	2
154380486	rs6427641	Yes	0.872	A	G	0.545	0.1770	0.0652	0.00695	1
154411473	rs115224285	Yes	0.607	T	C	0.018	0.6463	0.2441	0.00847	3
154346416	rs4406622	Yes	0.994	G	A	0.153	-0.2034	0.0849	0.01706	1
154359915	rs12077265	Yes	0.943	G	T	0.151	-0.2094	0.0874	0.01714	1
154346669	rs6662855	Yes	0.992	A	G	0.153	-0.2029	0.0848	0.01727	1
154342022	rs7518394	Yes	0.984	A	T	0.150	-0.2041	0.0856	0.01757	1
154352641	rs34749203	Yes	0.993	T	C	0.151	-0.2026	0.0850	0.01774	1
154346161	rs9728024	Yes	0.971	T	C	0.150	-0.2053	0.0862	0.01776	1
154390932	rs79794939	Yes	0.764	T	C	0.070	0.3319	0.1395	0.01782	2
154347662	rs4622059	Yes	0.994	T	C	0.152	-0.2020	0.0850	0.01802	1
154371487	rs12075836	Yes	0.919	T	C	0.140	0.2105	0.0886	0.01806	2
154338499	rs6662976	Yes	0.974	T	C	0.146	-0.2047	0.0865	0.01852	1
154479486	rs146563764	Yes	0.676	A	G	0.020	0.5279	0.2232	0.01856	3
154354370	rs61804488	Yes	0.986	G	A	0.153	-0.2011	0.0851	0.01860	1
154352252	rs35629421	Yes	0.997	A	C	0.151	-0.2005	0.0848	0.01861	1
154354643	rs61804489	Yes	0.985	T	C	0.153	-0.2011	0.0851	0.01861	1
154352133	rs4304577	Yes	0.997	C	T	0.151	-0.2005	0.0848	0.01861	1
154350589	rs3811451	No	0.988	C	T	0.153	-0.2004	0.0848	0.01861	1
154363305	rs61812565	Yes	0.984	T	C	0.152	-0.2012	0.0851	0.01862	1
154352017	rs1889316	Yes	0.997	T	C	0.151	-0.2004	0.0848	0.01862	1
154351762	154351762:I	Yes	0.998	TA	T	0.151	-0.2004	0.0848	0.01862	1
154351073	rs16865579	Yes	0.998	C	T	0.151	-0.2003	0.0848	0.01865	1
154350238	rs61803414	Yes	0.998	G	C	0.151	-0.2003	0.0848	0.01871	1
154350140	154350140:D	Yes	0.998	C	CTCTT	0.151	-0.2003	0.0848	0.01871	1
154353743	rs35595831	Yes	0.978	T	C	0.155	-0.2009	0.0851	0.01873	1
154349639	rs6690468	Yes	0.998	A	T	0.151	-0.2002	0.0848	0.01874	1
154348199	rs61803412	Yes	0.998	G	A	0.151	-0.2002	0.0848	0.01879	1
154348332	rs28530583	Yes	0.998	G	C	0.151	-0.2002	0.0848	0.01879	1
154347467	rs4526605	Yes	0.997	T	C	0.152	-0.2002	0.0848	0.01884	1
154346967	rs6672627	Yes	0.997	A	C	0.153	-0.2001	0.0848	0.01887	1
154345567	rs7530868	Yes	0.997	C	T	0.152	-0.2001	0.0849	0.01894	1
154354257	rs112527081	Yes	0.984	A	G	0.153	-0.2006	0.0851	0.01894	1
154345371	rs7530735	Yes	0.996	C	T	0.152	-0.2000	0.0849	0.01896	1
154345275	rs7523399	Yes	0.996	G	C	0.152	-0.2000	0.0849	0.01897	1
154344275	rs12066892	Yes	0.996	T	C	0.152	-0.2000	0.0849	0.01900	1
154343941	rs6667225	Yes	0.996	C	A	0.152	-0.2000	0.0849	0.01902	1
154343935	rs6701309	Yes	0.996	C	G	0.152	-0.2000	0.0849	0.01902	1
154354129	rs34065906	Yes	0.981	A	G	0.153	-0.2006	0.0852	0.01903	1
154353846	rs34146123	Yes	0.985	A	C	0.153	-0.2004	0.0851	0.01908	1
154346950	rs6663105	Yes	0.995	C	G	0.153	-0.1999	0.0849	0.01909	1
154341406	rs78808304	Yes	0.996	A	G	0.152	-0.1999	0.0849	0.01911	1
154340321	rs7552370	Yes	0.996	T	C	0.153	-0.1999	0.0849	0.01916	1
154348336	rs28410194	Yes	0.990	T	C	0.153	-0.1996	0.0849	0.01921	1

154340084	rs12063437	Yes	0.995	A	G	0.152	-0.1998	0.0850	0.01923	1
154352165	rs35112510	Yes	0.982	C	T	0.154	-0.2001	0.0851	0.01926	1
154339892	rs68031662	Yes	0.993	T	C	0.153	-0.1997	0.0850	0.01930	1
154363441	rs68138282	Yes	0.968	T	C	0.152	-0.2015	0.0860	0.01971	1
154334264	rs1948143	Yes	0.990	C	G	0.153	-0.1989	0.0850	0.01986	1
154338155	rs12068128	Yes	0.994	A	T	0.152	-0.1988	0.0851	0.02013	1
154330289	rs35229198	Yes	0.986	T	C	0.151	-0.1994	0.0856	0.02041	1
154337824	rs12749618	Yes	0.981	T	C	0.155	-0.1970	0.0852	0.02136	1
154371753	rs7547455	Yes	0.927	C	T	0.265	-0.1579	0.0684	0.02154	1
154331186	rs4414034	Yes	0.989	G	A	0.154	-0.1967	0.0853	0.02167	1
154352310	rs35091500	Yes	0.978	A	G	0.154	-0.1961	0.0852	0.02184	1
154328508	rs11265594	Yes	0.994	A	G	0.152	-0.1963	0.0853	0.02193	1
154352194	rs36029470	Yes	0.943	C	T	0.148	-0.1991	0.0874	0.02334	1
154388668	rs4521987	Yes	0.825	C	T	0.860	-0.2136	0.0941	0.02376	2
154333027	rs138273059	Yes	0.844	T	G	0.018	0.6481	0.2911	0.02660	2
154430647	rs191793127	Yes	0.644	T	C	0.021	-0.7117	0.3211	0.02728	4
154350145	154350145:D	Yes	0.963	T	TC	0.154	-0.1887	0.0855	0.02797	1
154345857	rs9727988	Yes	0.926	T	C	0.148	-0.1892	0.0881	0.03254	1
154344897	rs7511806	Yes	0.974	A	G	0.158	-0.1756	0.0847	0.03893	1
154368111	rs61812567	Yes	0.968	A	G	0.150	0.1713	0.0845	0.04345	2
154380934	rs72698116	Yes	0.533	G	A	0.013	-0.7446	0.3700	0.04494	5
154340750	154340750:I	Yes	0.702	CA	C	0.222	-0.1707	0.0848	0.04495	1
154357597	rs61812563	Yes	0.979	A	G	0.151	0.1668	0.0833	0.04601	2
154362686	rs12563459	Yes	0.976	A	G	0.152	0.1669	0.0834	0.04612	2
154382443	rs7411976	Yes	0.531	C	A	0.013	-0.7288	0.3643	0.04620	5
154383261	rs55886061	Yes	0.531	T	C	0.013	-0.7288	0.3646	0.04636	5
154368223	rs147763778	Yes	0.814	A	G	0.045	0.3389	0.1702	0.04719	6
154367247	rs7551007	Yes	0.973	C	T	0.151	0.1646	0.0836	0.04972	2
154366911	rs34094138	Yes	0.974	G	T	0.151	0.1646	0.0836	0.04973	2
154387025	rs72698123	Yes	0.523	C	T	0.013	-0.7202	0.3669	0.05042	-
154343588	rs6662003	Yes	0.913	T	C	0.136	-0.1795	0.0924	0.05293	-
154405495	rs115617158	Yes	0.785	A	G	0.021	0.5077	0.2633	0.05464	-
154411768	rs76093405	Yes	0.786	A	G	0.021	0.5045	0.2628	0.05574	-
154351960	rs1889315	Yes	0.968	C	T	0.301	-0.1315	0.0685	0.05577	-
154412524	rs149219382	Yes	0.792	A	G	0.020	0.5034	0.2636	0.05692	-
154483655	rs116059394	Yes	0.825	G	A	0.046	-0.3093	0.1632	0.05888	-
154351952	rs61803415	Yes	0.980	A	C	0.151	0.1568	0.0833	0.06060	-
154351984	rs61803416	Yes	0.979	A	G	0.151	0.1568	0.0833	0.06064	-
154395755	154395755:I	Yes	0.573	ATG	A	0.014	0.6910	0.3673	0.06073	-
154349563	rs12565279	Yes	0.980	T	A	0.151	0.1565	0.0833	0.06116	-
154373231	rs7553271	Yes	0.896	C	T	0.581	0.1227	0.0659	0.06340	-
154351199	rs34437053	Yes	0.989	A	G	0.306	-0.1245	0.0669	0.06345	-
154377898	rs4845617	Yes	0.887	A	G	0.415	-0.1236	0.0665	0.06396	-
154353262	rs11580178	Yes	0.990	A	T	0.306	-0.1238	0.0667	0.06426	-
154345835	rs71628610	Yes	0.975	G	A	0.151	0.1540	0.0835	0.06609	-
154343576	rs6661998	Yes	0.881	T	C	0.124	-0.1735	0.0965	0.07295	-
154343577	rs6666888	Yes	0.881	G	A	0.124	-0.1735	0.0965	0.07295	-
154332918	154332918:I	Yes	0.903	GT	G	0.305	-0.1259	0.0702	0.07375	-
154341479	rs6659828	Yes	0.986	G	A	0.302	-0.1182	0.0671	0.07885	-
154343486	rs6661909	Yes	0.987	T	C	0.303	-0.1181	0.0670	0.07899	-
154345089	rs7525436	Yes	0.986	G	A	0.304	-0.1175	0.0671	0.08060	-
154346077	rs9728585	Yes	0.981	C	A	0.302	-0.1169	0.0673	0.08331	-
154330659	rs11576181	Yes	0.979	G	T	0.296	-0.1166	0.0675	0.08508	-
154337177	rs6698130	Yes	0.992	A	G	0.302	-0.1157	0.0670	0.08510	-
154330183	rs10218433	Yes	0.989	C	T	0.302	-0.1158	0.0672	0.08554	-
154349381	rs10908834	Yes	0.980	T	C	0.693	0.1151	0.0669	0.08609	-
154329595	rs7555891	Yes	0.987	G	A	0.304	-0.1145	0.0668	0.08741	-

154328464	rs11265593	Yes	0.990	C	T	0.302	-0.1147	0.0671	0.08836	-
154335417	rs12719998	Yes	0.994	G	A	0.302	-0.1142	0.0669	0.08891	-
154335378	rs12738097	Yes	0.994	T	C	0.302	-0.1142	0.0669	0.08891	-
154332520	rs1073907	Yes	0.994	T	C	0.302	-0.1143	0.0670	0.08900	-
154330725	rs12143987	Yes	0.982	G	C	0.692	0.1136	0.0666	0.08906	-
154333216	rs11577266	Yes	0.994	G	A	0.302	-0.1142	0.0670	0.08907	-
					GCATG					
154333628	154333628:I	Yes	0.995	GT	G	0.302	-0.1141	0.0670	0.08917	-
154330749	rs11576193	Yes	0.992	G	T	0.303	-0.1141	0.0670	0.08974	-
154351880	rs1889314	Yes	0.978	A	G	0.690	0.1137	0.0669	0.09013	-
154332870	rs6696089	Yes	0.994	G	A	0.303	-0.1138	0.0670	0.09017	-
154333640	rs61803410	Yes	0.995	A	G	0.303	-0.1137	0.0670	0.09029	-
154344135	rs12061599	Yes	0.953	T	G	0.286	-0.1167	0.0690	0.09144	-
154335146	rs12118634	Yes	0.968	T	C	0.690	0.1113	0.0675	0.10018	-
154337209	rs6698143	Yes	0.948	T	G	0.298	-0.1133	0.0690	0.10147	-
154481153	rs66980031	Yes	0.797	G	C	0.040	-0.3295	0.2019	0.10353	-
154359024	rs185226600	Yes	0.860	T	C	0.010	-0.4205	0.2580	0.10397	-
154356459	rs11265606	Yes	0.988	T	C	0.296	-0.1101	0.0676	0.10414	-
154376820	rs66654715	Yes	0.740	C	G	0.040	-0.3230	0.1989	0.10524	-
154336126	rs6657938	Yes	0.979	G	A	0.295	-0.1095	0.0675	0.10581	-
154477069	rs6662503	Yes	0.988	A	T	0.838	-0.1427	0.0881	0.10624	-
154340761	rs7515004	Yes	0.942	A	T	0.294	-0.1112	0.0689	0.10749	-
154426190	rs12739228	Yes	0.775	A	G	0.037	-0.3387	0.2107	0.10887	-
154371340	rs71628615	Yes	0.881	C	A	0.014	-0.3891	0.2432	0.11048	-
154357678	rs11265607	Yes	0.998	G	A	0.291	-0.1077	0.0681	0.11466	-
154355008	rs56211693	Yes	0.984	T	C	0.295	-0.1080	0.0683	0.11482	-
154443014	rs79925547	Yes	0.624	T	C	0.011	-0.4684	0.2984	0.11740	-
154364328	rs11265609	Yes	0.999	T	C	0.291	-0.1068	0.0681	0.11756	-
154364762	rs9662562	Yes	0.992	T	A	0.290	-0.1072	0.0684	0.11824	-
154365235	rs9724691	Yes	0.997	A	T	0.291	-0.1066	0.0682	0.11905	-
154363985	rs11582424	No	1.000	C	A	0.291	-0.1060	0.0681	0.12012	-
154361406	rs12735458	Yes	0.887	G	A	0.016	-0.3630	0.2361	0.12499	-
154359179	rs6427627	Yes	0.998	C	T	0.387	-0.0951	0.0640	0.13836	-
154392851	rs146389272	Yes	0.642	A	G	0.028	-0.3402	0.2296	0.13922	-
154356481	rs10908835	No	1.000	G	A	0.387	-0.0949	0.0640	0.13934	-
154340789	rs12025518	Yes	0.976	C	A	0.250	0.1055	0.0717	0.14204	-
154367770	rs11585004	Yes	0.993	C	T	0.387	-0.0943	0.0642	0.14284	-
					CAGTA					
154345656	154345656:D	Yes	0.975	C	TA	0.249	0.1050	0.0716	0.14341	-
154336716	rs67156297	Yes	0.982	A	G	0.250	0.1049	0.0715	0.14355	-
154334176	rs6687939	Yes	0.983	A	G	0.250	0.1047	0.0715	0.14424	-
154334253	rs6687971	Yes	0.983	C	G	0.250	0.1047	0.0715	0.14425	-
154345344	rs35221765	Yes	0.978	A	G	0.250	0.1044	0.0713	0.14427	-
154362093	rs77609234	Yes	0.778	T	A	0.079	-0.1767	0.1220	0.14846	-
154394296	rs4556348	Yes	0.780	T	C	0.132	0.1563	0.1082	0.14956	-
154477263	rs6696177	Yes	0.973	A	G	0.830	-0.1267	0.0878	0.14982	-
154445104	rs79480105	Yes	0.802	A	G	0.036	-0.2617	0.1837	0.15524	-
154339919	rs35982711	Yes	0.897	A	C	0.280	-0.1020	0.0718	0.15657	-
154411852	rs61812595	Yes	0.829	A	G	0.066	0.1893	0.1339	0.15836	-
154345519	rs34055426	Yes	0.950	A	G	0.242	0.1028	0.0729	0.15967	-
154356377	rs12127600	Yes	0.997	A	T	0.612	0.0902	0.0642	0.16091	-
154395077	rs12048091	Yes	0.931	G	A	0.171	0.1260	0.0900	0.16261	-
154394484	rs145262901	Yes	0.676	A	G	0.025	0.2830	0.2044	0.16714	-
154470356	rs6689710	Yes	0.952	C	T	0.824	-0.1216	0.0881	0.16840	-
154394966	rs12048950	Yes	0.934	C	T	0.164	0.1259	0.0916	0.17026	-
154413904	rs114660934	Yes	0.829	A	G	0.039	-0.2490	0.1837	0.17614	-
154360637	rs9651054	Yes	0.970	T	A	0.375	-0.0884	0.0652	0.17623	-
154370020	rs6427631	Yes	0.970	C	T	0.292	-0.0934	0.0691	0.17745	-

154475332	rs188460497	Yes	0.570	T	G	0.016	-0.4938	0.3661	0.17822	-
154368928	rs952146	Yes	0.988	G	A	0.387	-0.0868	0.0646	0.18004	-
154477585	rs12118074	Yes	0.997	A	G	0.835	-0.1162	0.0875	0.18497	-
154486370	rs4845636	No	0.999	G	A	0.834	-0.1159	0.0874	0.18545	-
TCCCT										
154479999	154479999:I	Yes	0.970	GGTG	T	0.156	0.1211	0.0914	0.18599	-
154478292	rs12124333	Yes	0.998	A	T	0.834	-0.1159	0.0875	0.18612	-
154481158	rs7513603	Yes	0.999	C	T	0.835	-0.1158	0.0874	0.18624	-
154474131	rs4845635	Yes	0.996	G	C	0.834	-0.1159	0.0875	0.18627	-
154481624	rs10752642	Yes	0.999	T	C	0.835	-0.1157	0.0874	0.18627	-
154457855	rs4474240	Yes	0.996	C	A	0.834	-0.1157	0.0874	0.18656	-
154480157	rs72698167	Yes	0.996	A	G	0.165	0.1156	0.0878	0.18893	-
154436750	rs4345796	Yes	0.971	T	C	0.158	0.1187	0.0907	0.19111	-
154436436	rs61812626	Yes	0.973	A	G	0.158	0.1160	0.0907	0.20148	-
154471371	rs56233546	Yes	0.995	G	A	0.165	0.1121	0.0877	0.20215	-
154390575	rs11588248	Yes	0.792	G	A	0.151	0.1217	0.0953	0.20249	-
154467816	rs61812631	Yes	0.995	T	A	0.165	0.1112	0.0877	0.20546	-
154462195	rs16836054	Yes	0.995	A	G	0.165	0.1111	0.0876	0.20567	-
154464160	rs4845634	Yes	0.995	A	G	0.165	0.1111	0.0876	0.20582	-
154461260	rs111885536	Yes	0.994	A	G	0.165	0.1108	0.0877	0.20690	-
154394766	rs12047973	Yes	0.931	G	A	0.164	0.1156	0.0920	0.20981	-
154376671	rs3887104	Yes	0.879	T	C	0.165	0.1044	0.0832	0.21026	-
154452204	rs14021	Yes	0.991	C	T	0.165	0.1111	0.0886	0.21044	-
GTGCC										
154480005	154480005:I	Yes	0.967	C	G	0.154	0.1134	0.0913	0.21522	-
154330994	rs11590941	Yes	0.670	T	A	0.033	-0.2425	0.1956	0.21584	-
154485039	rs7526247	Yes	0.963	C	T	0.827	-0.1085	0.0878	0.21758	-
154411897	rs191856278	Yes	0.887	A	T	0.014	-0.2850	0.2324	0.22092	-
154413242	rs113325045	Yes	0.734	A	G	0.037	0.1991	0.1626	0.22177	-
154474557	rs6703672	Yes	0.928	C	T	0.821	-0.1053	0.0861	0.22196	-
154399649	rs12023358	Yes	0.980	T	C	0.163	0.1079	0.0900	0.23154	-
154401679	rs8192282	Yes	0.984	A	G	0.163	0.1072	0.0899	0.23366	-
154416069	rs116141616	Yes	0.770	A	G	0.020	-0.2586	0.2168	0.23370	-
154435274	rs7354845	Yes	0.860	A	T	0.015	-0.2760	0.2319	0.23471	-
154420333	rs113580743	Yes	0.694	A	G	0.047	0.1837	0.1586	0.24738	-
154439474	rs114564798	Yes	0.868	T	C	0.015	-0.2670	0.2308	0.24820	-
154421530	rs12404936	Yes	0.590	C	T	0.084	-0.1493	0.1294	0.24946	-
154428309	rs140393337	Yes	0.734	T	G	0.012	-0.3013	0.2612	0.24949	-
154432342	rs77741705	Yes	0.873	G	C	0.015	-0.2662	0.2319	0.25185	-
154434836	rs114879247	Yes	0.848	C	T	0.035	-0.2328	0.2031	0.25249	-
154450365	rs185104823	Yes	0.620	A	T	0.026	-0.2433	0.2176	0.26422	-
154423485	rs4845626	Yes	0.989	T	G	0.170	0.0971	0.0872	0.26599	-
154463784	rs115306743	Yes	0.736	C	A	0.013	-0.2928	0.2669	0.27326	-
154415261	154415261:D	Yes	0.851	C	CTTCT	0.015	-0.2540	0.2318	0.27392	-
154430092	rs11265618	No	1.000	T	C	0.170	0.0936	0.0867	0.28121	-
154408916	rs57502626	Yes	0.987	A	T	0.163	0.0969	0.0901	0.28293	-
154410482	rs61812592	Yes	0.988	A	G	0.163	0.0967	0.0901	0.28342	-
154420052	154420052:I	Yes	0.517	CAT	C	0.010	-0.4392	0.4089	0.28354	-
154410490	rs61812593	Yes	0.988	C	T	0.163	0.0967	0.0901	0.28371	-
154330331	rs144102756	Yes	0.673	G	C	0.011	-0.3097	0.2899	0.28615	-
154361126	rs115437600	Yes	0.629	A	G	0.036	0.2334	0.2201	0.28968	-
154370938	rs2054855	Yes	0.894	T	C	0.129	0.0964	0.0912	0.29143	-
154409520	rs55826755	Yes	0.993	G	C	0.162	0.0922	0.0899	0.30622	-
154411628	rs61812594	Yes	0.993	G	A	0.162	0.0916	0.0899	0.30895	-
154450510	rs150056239	Yes	0.611	C	A	0.015	-0.3130	0.3115	0.31573	-
154421554	rs61812599	Yes	0.987	A	G	0.162	0.0895	0.0899	0.32008	-
154472809	rs115870735	Yes	0.734	C	T	0.010	-0.2765	0.2784	0.32132	-
154414691	rs61812596	Yes	0.992	T	C	0.162	0.0893	0.0900	0.32157	-

154419584	rs111301013	Yes	0.990	A	C	0.162	0.0890	0.0900	0.32295	-
154478264	154478264:I	Yes	0.958	AC	A	0.622	-0.0659	0.0670	0.32568	-
154419980	rs11265616	Yes	0.699	C	T	0.361	0.0771	0.0790	0.33025	-
154480123	rs35013837	Yes	0.747	T	C	0.141	-0.0982	0.1021	0.33701	-
154417187	rs55800510	Yes	0.986	T	C	0.163	0.0866	0.0902	0.33791	-
154478114	rs75456865	Yes	0.855	T	A	0.037	-0.1822	0.1911	0.34117	-
154476235	154476235:D	Yes	0.855	C	CG	0.037	-0.1812	0.1914	0.34447	-
154362445	rs147608290	Yes	0.891	T	C	0.258	-0.0718	0.0759	0.34518	-
154340438	rs139364224	Yes	0.715	C	T	0.034	0.1916	0.2032	0.34621	-
154424497	rs11804305	Yes	0.992	T	C	0.161	0.0845	0.0898	0.34745	-
154431405	rs10159236	Yes	0.994	A	C	0.162	0.0832	0.0897	0.35436	-
154374201	rs116179745	Yes	0.541	C	T	0.012	-0.2942	0.3173	0.35460	-
154394072	rs4556347	Yes	0.579	T	A	0.728	-0.0805	0.0871	0.35599	-
154335324	rs150550224	Yes	0.801	T	C	0.017	-0.2996	0.3245	0.35659	-
154419931	154419931:D	Yes	0.662	A	AT	0.224	0.0846	0.0919	0.35792	-
154331320	rs145030659	Yes	0.800	T	C	0.017	-0.2987	0.3246	0.35811	-
154328261	rs140907814	Yes	0.800	T	C	0.017	-0.2981	0.3247	0.35924	-
154432622	rs4308966	Yes	0.988	C	T	0.163	0.0821	0.0898	0.36080	-
154432420	rs4329505	Yes	0.988	C	T	0.163	0.0820	0.0898	0.36168	-
154426947	rs4845374	Yes	0.991	A	T	0.162	0.0818	0.0899	0.36324	-
154426944	154426944:I	Yes	0.986	CA	C	0.162	0.0813	0.0903	0.36864	-
154419517	rs139935284	Yes	0.589	A	T	0.019	-0.2456	0.2763	0.37468	-
154423764	rs12129500	Yes	0.968	C	T	0.580	0.0562	0.0634	0.37575	-
154430437	154430437:D	Yes	0.892	C	CT	0.163	0.0825	0.0938	0.37959	-
154397932	rs10908836	Yes	0.924	T	C	0.564	0.0561	0.0647	0.38659	-
154376896	rs12132326	Yes	0.687	A	G	0.048	0.1761	0.2053	0.39156	-
154395946	rs6689306	Yes	0.972	G	A	0.592	0.0528	0.0638	0.40828	-
154389196	rs4075015	Yes	0.807	T	A	0.419	0.0566	0.0687	0.41110	-
154404454	rs116037345	Yes	0.913	T	C	0.027	-0.1530	0.1890	0.41864	-
154336175	rs112559935	Yes	0.698	T	G	0.043	0.1258	0.1553	0.41876	-
154450919	154450919:I	Yes	0.537	AC	A	0.057	-0.1309	0.1617	0.41886	-
154397589	rs12118770	Yes	0.973	C	T	0.591	0.0509	0.0638	0.42567	-
154428505	rs6694258	Yes	0.991	A	C	0.593	0.0501	0.0628	0.42567	-
154425135	rs7526131	Yes	0.974	A	G	0.589	0.0506	0.0635	0.42609	-
154423909	rs7536152	Yes	0.984	G	A	0.590	0.0494	0.0634	0.43645	-
154426097	rs6689393	Yes	0.995	G	A	0.592	0.0488	0.0628	0.43776	-
154401972	rs6694817	Yes	0.985	C	T	0.594	0.0487	0.0637	0.44506	-
154406540	rs59632925	Yes	0.990	G	T	0.598	0.0488	0.0643	0.44815	-
154397984	rs10908838	Yes	0.982	G	T	0.594	0.0483	0.0638	0.44907	-
154417044	rs11265612	Yes	0.981	G	A	0.597	0.0485	0.0643	0.45099	-
154436920	rs4291493	Yes	0.828	C	T	0.724	0.0557	0.0741	0.45227	-
154422067	rs4845625	Yes	0.992	C	T	0.593	0.0473	0.0631	0.45391	-
154337957	rs139347135	Yes	0.568	T	C	0.013	-0.2978	0.3975	0.45413	-
154400799	rs6427658	Yes	0.984	C	T	0.594	0.0477	0.0637	0.45430	-
154418088	rs6683206	Yes	0.908	C	T	0.574	0.0492	0.0657	0.45500	-
154431123	rs142712385	Yes	0.879	A	T	0.068	0.1094	0.1467	0.45626	-
154431128	rs151017214	Yes	0.879	A	G	0.068	0.1094	0.1467	0.45626	-
154445362	rs147700711	Yes	0.768	T	G	0.011	-0.2326	0.3152	0.46113	-
154404406	rs7553796	Yes	0.990	C	A	0.600	0.0472	0.0642	0.46253	-
154478263	154478263:I	Yes	0.984	CA	C	0.644	-0.0480	0.0663	0.47006	-
154404380	rs7549338	Yes	0.992	G	C	0.599	0.0463	0.0642	0.47147	-
154409100	rs6667434	Yes	0.995	G	A	0.599	0.0461	0.0641	0.47237	-
154435293	rs55668699	Yes	0.933	A	T	0.208	-0.0547	0.0760	0.47271	-
154461480	rs41269913	Yes	0.750	T	C	0.040	0.1425	0.1983	0.47271	-
154408340	rs4845371	Yes	0.994	C	T	0.599	0.0461	0.0641	0.47291	-
154454309	rs76518735	Yes	0.606	C	A	0.017	-0.2192	0.3055	0.47357	-
154455249	rs144029367	Yes	0.606	C	T	0.017	-0.2192	0.3055	0.47357	-

154418414	154418414:I	Yes	0.801	TC	T	0.329	-0.0507	0.0712	0.47662	-
154459477	rs10908840	Yes	0.993	T	C	0.479	-0.0443	0.0625	0.47921	-
154419843	rs6686750	Yes	0.988	G	A	0.592	0.0450	0.0636	0.47972	-
154394297	rs7525477	Yes	0.716	A	G	0.460	0.0509	0.0721	0.48078	-
154476522	rs116247632	Yes	0.604	T	C	0.021	-0.1813	0.2654	0.49493	-
154488533	rs12128408	Yes	0.981	G	A	0.655	-0.0454	0.0666	0.49627	-
154397933	rs10908837	Yes	0.926	A	G	0.556	0.0437	0.0642	0.49640	-
154384293	rs12135008	Yes	0.577	A	G	0.039	0.1400	0.2061	0.49742	-
154487060	rs12740969	Yes	0.998	G	T	0.646	-0.0435	0.0657	0.50851	-
154479670	rs6664608	Yes	0.998	T	C	0.646	-0.0433	0.0657	0.51027	-
154470606	rs6689965	Yes	0.999	A	T	0.646	-0.0432	0.0658	0.51157	-
154477440	rs12118018	Yes	0.997	A	G	0.646	-0.0431	0.0658	0.51283	-
154455949	rs12568083	Yes	0.999	C	T	0.646	-0.0430	0.0657	0.51317	-
154464572	rs4478801	No	1.000	A	G	0.646	-0.0429	0.0657	0.51433	-
154371243	rs76033854	Yes	0.857	A	G	0.030	-0.1440	0.2208	0.51478	-
154479132	rs144237734	Yes	0.623	A	G	0.015	0.2269	0.3499	0.51714	-
154464945	rs6684921	Yes	0.997	C	A	0.646	-0.0425	0.0658	0.51831	-
154410955	rs4553185	No	1.000	T	C	0.591	0.0411	0.0635	0.51840	-
154473660	rs6700296	Yes	0.998	C	T	0.646	-0.0425	0.0658	0.51854	-
154451420	rs11265622	Yes	0.995	G	A	0.646	-0.0424	0.0660	0.52170	-
154342517	rs79438587	Yes	0.778	T	C	0.167	0.0623	0.0986	0.52779	-
154466188	rs6686276	Yes	0.997	A	C	0.647	-0.0412	0.0658	0.53151	-
154474875	rs12753666	Yes	0.983	A	G	0.642	-0.0409	0.0664	0.53850	-
154487926	rs7519499	Yes	0.998	A	G	0.647	-0.0397	0.0659	0.54714	-
154446198	rs58348886	Yes	0.975	C	T	0.184	-0.0487	0.0816	0.55040	-
154404336	rs7549250	Yes	0.993	T	C	0.592	0.0380	0.0637	0.55084	-
154339794	rs116568035	Yes	0.931	A	G	0.031	-0.1257	0.2106	0.55104	-
154330042	rs7514026	Yes	0.938	C	T	0.425	0.0388	0.0652	0.55241	-
154433897	rs147140395	Yes	0.883	A	G	0.025	-0.1115	0.1897	0.55708	-
154430798	rs10908839	Yes	0.984	G	C	0.794	0.0433	0.0739	0.55845	-
154391504	rs145909430	Yes	0.535	C	T	0.017	-0.1784	0.3051	0.55922	-
154490178	rs4845637	Yes	0.992	G	A	0.651	-0.0378	0.0660	0.56786	-
154400015	rs4845618	Yes	0.985	T	G	0.586	0.0360	0.0632	0.56973	-
154395212	rs4133213	Yes	0.944	A	C	0.452	-0.0353	0.0628	0.57466	-
154474900	rs12753680	Yes	0.967	A	G	0.645	-0.0371	0.0662	0.57622	-
154397610	rs12117832	Yes	0.964	G	A	0.581	0.0355	0.0636	0.57781	-
154475330	rs6658175	Yes	0.994	A	T	0.645	-0.0366	0.0658	0.57874	-
154487763	rs10908841	Yes	0.998	T	C	0.646	-0.0365	0.0656	0.57878	-
154400320	rs6687726	Yes	0.986	G	A	0.585	0.0350	0.0632	0.57944	-
154394417	rs4601580	Yes	0.761	A	T	0.536	-0.0381	0.0690	0.58078	-
154484788	rs7518694	Yes	0.999	G	C	0.647	-0.0361	0.0656	0.58292	-
154480318	rs5018567	Yes	0.998	C	T	0.647	-0.0361	0.0657	0.58309	-
154484017	rs9660786	Yes	0.998	T	A	0.647	-0.0360	0.0656	0.58331	-
154397416	rs12118721	Yes	0.984	C	T	0.585	0.0347	0.0632	0.58332	-
154442960	rs11265621	Yes	0.968	A	G	0.654	-0.0368	0.0671	0.58408	-
154478600	rs12119111	Yes	0.997	A	G	0.646	-0.0358	0.0657	0.58578	-
154487258	rs11490956	Yes	0.997	T	G	0.188	-0.0438	0.0804	0.58579	-
154487489	rs111600849	Yes	0.997	A	G	0.188	-0.0438	0.0804	0.58579	-
154482669	rs73020232	Yes	0.998	T	C	0.188	-0.0433	0.0803	0.58975	-
154482767	rs73020234	Yes	0.998	A	C	0.188	-0.0433	0.0803	0.58980	-
154480485	rs11577167	No	0.997	T	C	0.025	-0.1014	0.1884	0.59074	-
154436641	154436641:D	Yes	0.894	T	TA	0.742	0.0390	0.0727	0.59235	-
154485640	rs73020246	Yes	0.996	G	A	0.188	-0.0430	0.0803	0.59302	-
154472533	154472533:I	Yes	0.996	GT	G	0.188	-0.0427	0.0802	0.59458	-
154487354	rs10465961	Yes	0.699	A	T	0.680	-0.0430	0.0811	0.59648	-
154465577	rs73018293	Yes	0.996	T	C	0.188	-0.0417	0.0803	0.60397	-
154466301	rs59838898	Yes	0.996	T	C	0.188	-0.0417	0.0803	0.60398	-

154468135	rs10047079	Yes	0.996	C	T	0.188	-0.0417	0.0803	0.60414	-
154405058	rs4845619	Yes	0.993	G	T	0.591	0.0328	0.0638	0.60768	-
154396203	rs77302258	Yes	0.915	G	A	0.077	0.0658	0.1310	0.61613	-
154434936	rs6687597	Yes	0.963	A	G	0.781	0.0365	0.0735	0.61981	-
154436640	154436640:D	Yes	0.885	T	TTA	0.736	0.0361	0.0728	0.62037	-
154433466	rs7537316	Yes	0.986	A	G	0.785	0.0356	0.0731	0.62630	-
154433415	rs7546068	Yes	0.986	T	C	0.785	0.0356	0.0731	0.62636	-
154432948	rs6698040	Yes	0.985	C	T	0.785	0.0353	0.0731	0.62918	-
154432904	rs35699331	Yes	0.985	C	T	0.785	0.0353	0.0731	0.62928	-
154433407	rs7537291	Yes	0.985	A	G	0.785	0.0352	0.0731	0.63002	-
154436404	rs4341355	Yes	0.995	G	C	0.784	0.0350	0.0727	0.63042	-
154436384	rs4509570	Yes	0.995	C	G	0.784	0.0350	0.0727	0.63052	-
154436195	rs4240872	No	1.000	T	C	0.784	0.0345	0.0726	0.63500	-
154415675	rs79219014	Yes	0.572	T	G	0.024	-0.1216	0.2597	0.63972	-
154353511	rs187481223	Yes	0.683	C	T	0.071	0.0696	0.1512	0.64546	-
154380419	rs57569414	Yes	0.802	A	C	0.146	0.0437	0.0957	0.64839	-
154433905	rs7546552	Yes	0.989	A	C	0.785	0.0333	0.0729	0.64843	-
154415848	rs186110340	Yes	0.828	G	C	0.028	0.0839	0.1875	0.65467	-
154354350	rs116088025	Yes	0.969	T	C	0.141	0.0405	0.0908	0.65586	-
154432042	rs10752641	Yes	0.982	C	G	0.786	0.0322	0.0732	0.66058	-
154328543	rs10908831	Yes	0.985	T	C	0.416	0.0280	0.0649	0.66702	-
154444591	rs6669229	Yes	0.988	G	A	0.812	0.0345	0.0805	0.66891	-
154444209	rs7526293	Yes	0.987	C	T	0.812	0.0343	0.0805	0.67047	-
154330515	154330515:D	Yes	0.941	C	CTT	0.071	0.0502	0.1214	0.67929	-
154430447	154430447:I	Yes	0.823	TC	T	0.567	-0.0275	0.0667	0.67996	-
154364317	rs11580535	Yes	0.981	T	G	0.138	0.0368	0.0908	0.68576	-
154360838	rs72633650	Yes	0.981	C	T	0.139	0.0364	0.0908	0.68856	-
154487726	rs12403537	Yes	0.990	A	G	0.191	-0.0319	0.0797	0.68912	-
154435346	rs6427672	Yes	0.949	T	C	0.776	0.0295	0.0742	0.69138	-
154433911	rs7546555	Yes	0.987	T	C	0.786	0.0285	0.0730	0.69640	-
154469825	rs140615642	Yes	0.784	C	T	0.023	0.0870	0.2297	0.70507	-
154420024	154420024:D	Yes	0.597	C	CACAT	0.202	-0.0357	0.0955	0.70903	-
154395125	rs11265611	Yes	0.925	A	G	0.618	0.0245	0.0657	0.70988	-
154439865	rs4379670	Yes	0.991	A	T	0.823	0.0299	0.0811	0.71204	-
154420028	154420028:D	Yes	0.957	T	TAC	0.420	0.0231	0.0626	0.71267	-
154438084	rs7514452	No	0.998	T	C	0.823	0.0292	0.0806	0.71720	-
154437896	rs2229238	Yes	0.997	C	T	0.823	0.0287	0.0807	0.72207	-
154438880	rs4072391	Yes	0.993	C	T	0.822	0.0287	0.0808	0.72269	-
154391882	rs35717427	Yes	0.697	A	G	0.154	0.0345	0.0992	0.72771	-
154409434	rs79778789	Yes	0.546	G	A	0.045	0.0661	0.1904	0.72875	-
154360187	rs114800510	Yes	0.804	C	T	0.039	-0.0588	0.1710	0.73135	-
154372838	rs115717606	Yes	0.793	G	A	0.039	-0.0566	0.1713	0.74124	-
154329854	154329854:D	Yes	0.947	G	GTAAA	0.156	-0.0288	0.0884	0.74503	-
154475331	rs79662683	Yes	0.971	A	C	0.632	-0.0206	0.0664	0.75670	-
154422733	rs45478197	Yes	0.944	T	C	0.077	0.0402	0.1317	0.76024	-
154374850	rs115200978	Yes	0.663	T	C	0.016	0.0862	0.2834	0.76102	-
154395839	rs6684439	No	1.000	T	C	0.422	-0.0182	0.0614	0.76683	-
154368095	rs111908494	Yes	0.920	G	A	0.081	0.0325	0.1167	0.78041	-
154368098	rs113639721	Yes	0.920	C	T	0.081	0.0325	0.1167	0.78041	-
154418415	rs11265613	Yes	0.979	C	T	0.423	-0.0169	0.0624	0.78691	-
154346153	rs12029292	Yes	0.917	T	C	0.435	0.0166	0.0663	0.80223	-
154445503	rs6675472	Yes	0.924	C	T	0.798	0.0200	0.0806	0.80407	-
154405024	rs56383622	Yes	0.989	G	A	0.427	-0.0153	0.0620	0.80569	-
154407713	rs7521458	Yes	0.993	C	T	0.427	-0.0152	0.0619	0.80616	-
154406656	rs4845620	Yes	0.993	G	A	0.427	-0.0151	0.0619	0.80751	-
154409730	rs4845621	Yes	0.994	A	G	0.428	-0.0150	0.0619	0.80846	-
154345686	rs72696290	Yes	0.986	C	T	0.445	0.0152	0.0634	0.81029	-

154432877	rs6690230	Yes	0.986	G	C	0.623	-0.0151	0.0633	0.81120	-
154432957	rs6695045	Yes	0.986	G	A	0.623	-0.0151	0.0633	0.81167	-
154352521	rs11265604	Yes	0.989	A	G	0.446	0.0149	0.0631	0.81397	-
154430444	154430444:I	Yes	0.897	TTTTC	T	0.619	0.0151	0.0656	0.81793	-
154407419	rs7518199	Yes	0.993	C	A	0.428	-0.0141	0.0620	0.81966	-
154358583	rs4845612	Yes	0.986	C	T	0.462	-0.0134	0.0630	0.83207	-
154355875	rs186303011	Yes	0.875	G	A	0.073	0.0259	0.1224	0.83266	-
154470675	154470675:D	Yes	0.818	T	TCTC	0.117	-0.0227	0.1080	0.83369	-
154435289	rs55676222	Yes	0.605	T	A	0.107	0.0273	0.1344	0.83895	-
154366366	154366366:I	Yes	0.963	GT	G	0.094	-0.0220	0.1083	0.83923	-
154416969	rs12730036	Yes	0.979	T	C	0.426	-0.0120	0.0623	0.84787	-
154419982	rs192441295	Yes	0.525	C	T	0.044	-0.0386	0.2021	0.84875	-
154416935	rs12753254	Yes	0.982	A	G	0.427	-0.0118	0.0623	0.85027	-
154374162	rs79207650	Yes	0.732	A	G	0.048	-0.0279	0.1507	0.85325	-
154411419	rs4845622	Yes	0.995	C	A	0.428	-0.0108	0.0617	0.86171	-
154414037	rs4393147	Yes	0.994	T	C	0.428	-0.0106	0.0618	0.86426	-
154414086	rs4453032	Yes	0.994	G	A	0.428	-0.0105	0.0618	0.86465	-
154414296	rs6664201	Yes	0.994	T	C	0.428	-0.0105	0.0618	0.86477	-
154355251	rs12121085	No	1.000	T	G	0.446	0.0104	0.0630	0.86929	-
154486799	rs72698169	Yes	0.986	C	A	0.167	0.0138	0.0844	0.87049	-
154417829	rs4845373	Yes	0.973	T	C	0.423	-0.0100	0.0625	0.87244	-
154438143	rs114445392	Yes	0.662	T	C	0.014	0.0401	0.2678	0.88091	-
154333569	rs11590203	No	0.985	T	G	0.152	0.0117	0.0880	0.89469	-
154364972	rs12029939	Yes	0.986	A	G	0.461	-0.0080	0.0629	0.89937	-
154334683	rs72633646	Yes	0.997	A	G	0.150	0.0112	0.0881	0.89939	-
154335609	rs72633647	Yes	0.997	A	T	0.150	0.0111	0.0881	0.89973	-
154332672	rs6698881	Yes	0.996	A	T	0.150	0.0111	0.0882	0.90015	-
154329095	rs6686467	Yes	0.989	A	G	0.150	0.0111	0.0885	0.90029	-
154369252	rs17654071	Yes	0.981	G	A	0.461	-0.0077	0.0630	0.90326	-
154330041	154330041:I	Yes	0.912	TC	T	0.424	0.0081	0.0670	0.90385	-
154328434	rs72633645	Yes	0.987	T	C	0.150	0.0107	0.0884	0.90399	-
154345962	rs138765671	Yes	0.960	A	C	0.143	0.0107	0.0906	0.90605	-
154339299	rs113624284	Yes	0.985	G	A	0.150	0.0099	0.0884	0.91062	-
154360700	rs72698103	Yes	0.982	A	G	0.459	-0.0070	0.0630	0.91131	-
154337238	rs6664039	Yes	0.992	G	A	0.150	0.0097	0.0884	0.91297	-
154340230	rs56807273	Yes	0.984	T	C	0.150	0.0095	0.0884	0.91426	-
154462360	rs12044132	No	1.000	T	C	0.167	0.0090	0.0842	0.91521	-
154483868	rs12023772	Yes	0.959	A	G	0.173	0.0089	0.0847	0.91606	-
154365998	rs6692515	Yes	0.975	C	T	0.456	-0.0065	0.0631	0.91791	-
154349121	rs56264602	Yes	0.970	A	G	0.152	-0.0066	0.0881	0.94026	-
154418749	rs4576655	Yes	0.997	T	C	0.431	0.0045	0.0618	0.94232	-
154420778	rs7529229	Yes	0.995	C	T	0.431	0.0043	0.0618	0.94501	-
154367489	rs74456695	Yes	0.640	T	A	0.009	-0.0250	0.3684	0.94600	-
154365994	154365994:I	Yes	0.906	CT	C	0.108	-0.0072	0.1065	0.94622	-
154419952	rs12035169	Yes	0.617	C	T	0.328	-0.0057	0.0852	0.94630	-
154420402	rs7512646	Yes	0.995	C	G	0.431	0.0039	0.0618	0.94966	-
154420087	rs61812598	Yes	0.988	A	G	0.422	-0.0035	0.0616	0.95430	-
154392674	154392674:I	Yes	0.736	TA	T	0.080	0.0073	0.1313	0.95578	-
154418879	rs4537545	No	1.000	T	C	0.431	0.0033	0.0618	0.95717	-
154349159	rs59356432	Yes	0.977	G	A	0.153	-0.0044	0.0877	0.95963	-
154348879	rs9804073	Yes	0.977	T	C	0.153	-0.0044	0.0878	0.95997	-
154347784	rs58548028	Yes	0.966	A	G	0.097	-0.0040	0.1065	0.96974	-
154348513	rs9803950	Yes	0.967	C	G	0.156	-0.0033	0.0880	0.96981	-
154379369	rs72698115	Yes	0.942	C	A	0.094	-0.0034	0.1078	0.97469	-
154428283	rs12133641	Yes	0.979	G	A	0.418	0.0017	0.0621	0.97834	-
154364140	rs11265608	No	1.000	A	G	0.096	-0.0029	0.1054	0.97836	-
154369683	rs111810442	Yes	0.988	G	C	0.095	-0.0021	0.1059	0.98396	-

154367754	rs113057497	Yes	0.992	T	C	0.095	-0.0020	0.1058	0.98511	-
154363137	rs151220053	Yes	0.995	T	A	0.096	-0.0018	0.1057	0.98629	-
154367898	rs138582043	Yes	0.988	T	C	0.095	-0.0017	0.1061	0.98692	-
154369981	rs73026617	Yes	0.988	T	C	0.096	-0.0017	0.1058	0.98699	-
154415777	rs4845623	No	1.000	G	A	0.438	0.0010	0.0621	0.98717	-
154327737	rs113936582	Yes	0.925	G	C	0.148	0.0013	0.0917	0.98862	-
154425456	rs12126142	Yes	0.997	A	G	0.422	-0.0007	0.0614	0.99063	-
154351323	rs60412881	Yes	0.984	C	T	0.154	-0.0009	0.0867	0.99180	-
154361788	rs12026876	Yes	0.995	A	G	0.096	-0.0010	0.1055	0.99242	-
154365886	rs12033701	Yes	0.994	T	C	0.096	-0.0010	0.1056	0.99256	-
154353358	rs11579718	Yes	0.984	G	A	0.154	-0.0008	0.0867	0.99309	-
154361226	rs111920902	Yes	0.995	T	C	0.096	-0.0009	0.1055	0.99331	-
154351277	rs60767732	Yes	0.984	T	G	0.154	-0.0007	0.0867	0.99371	-
154351304	rs60682501	Yes	0.984	G	A	0.154	-0.0007	0.0867	0.99376	-
154347450	rs9803896	Yes	0.949	A	G	0.150	-0.0007	0.0883	0.99390	-
154355501	rs72696301	Yes	0.993	C	G	0.096	-0.0008	0.1057	0.99413	-
154351247	rs57100877	Yes	0.985	G	C	0.154	-0.0006	0.0867	0.99420	-
154360684	rs9651055	Yes	0.995	G	A	0.096	-0.0008	0.1055	0.99432	-
154351717	rs1889313	Yes	0.985	A	C	0.154	-0.0006	0.0867	0.99438	-
154360492	rs9651036	Yes	0.995	A	C	0.096	-0.0007	0.1055	0.99450	-
154349605	rs11582433	Yes	0.985	T	C	0.154	-0.0005	0.0867	0.99520	-
154359411	rs9651053	Yes	0.995	A	G	0.096	-0.0005	0.1055	0.99614	-
154419892	rs12730935	Yes	0.964	A	G	0.415	-0.0003	0.0627	0.99637	-
154416805	rs139952834	Yes	0.682	T	C	0.018	-0.0012	0.3456	0.99724	-
154415396	rs4845372	Yes	0.999	A	C	0.438	0.0002	0.0621	0.99796	-
154368224	rs144111494	Yes	0.948	T	C	0.102	-0.0003	0.1065	0.99808	-
154426970	rs2228145	Yes	0.998	C	A	0.422	0.0000	0.0613	0.99960	-
154426264	rs4129267	No	1.00	T	C	0.422	0.0000	0.0613	1.00000	-

Supplementary Table 3. Independent SNPs ($r^2 < 0.1$) with strongest evidence for association with sIL-6R serum levels in the discovery cohort (N = 360).

SNP	Effect allele	Effect allele frequency	Variance explained, r^2	Beta	SE	Uncorrected P-value	Corrected P-value*
After adjustment for rs4129267							
rs12083537	G	0.23	0.031	-0.259	0.073	0.0005	0.0496
rs138227751	A	0.07	0.018	0.322	0.116	0.0058	0.3827
rs115224285	T	0.01	0.017	0.646	0.244	0.0085	0.4899
rs191793127	T	0.03	0.011	-0.712	0.321	0.0273	0.8489
rs72698116	G	0.01	0.008	-0.745	0.370	0.0449	0.9490
rs147763778	A	0.05	0.008	0.339	0.170	0.0472	0.9551
After adjustment for rs4129267 and rs12083537							
rs116059394	G	0.05	0.013	-0.386	0.160	0.0161	0.6947
rs138227751	A	0.07	0.011	0.255	0.114	0.0263	0.8391
rs115224285	T	0.01	0.009	0.506	0.241	0.0364	0.9139

* Empirical P-values corrected for the total number of SNPs tested (N = 471) through 100 000 permutations.

Supplementary Table 4. Demographics and clinical characteristics of 354 asthmatics included in the cohort used to replicate SNP associations with sIL-6R serum levels.

rs4129267 genotype	CC	CT	TT	All
N	136	160	58	354
Age (mean, SD, range)	49,17.57,13-87	50,16.08,10-86	52,15.14,9-90	50,16.51,9-90
Sex (% female)	63.2	68.8	74.1	67.5
Hay fever (% yes, no, unknown)	61.8,36,2.2	55.6,42.5,1.9	60.3,39.7,0	58.8,39.5,1.7
Eczema (% yes, no, unknown)	34.6,64.7,0.7	36.9,61.9,1.2	37.9,62.1,0	36.2,63,0.8
Family history (% yes, no, unknown)	64.7,31.6,3.7	68.8,30.6,0.6	72.4,24.1,3.4	67.8,29.9,2.3
Asthma onset (% ≤16, >16, unknown)	60.3,33.1,6.6	59.4,30.6,10	56.9,34.5,8.6	59.3,32.2,8.5
sIL-6R levels, SD (ng/mL)	49.68,13.04	71.78,16.27	88.25,20.92	65.99,21.31

Supplementary Table 5. Association results between rs12083537 (effect allele: G) and *IL6R* mRNA levels measured by 32 individual Affymetrix probes, using RNA extracted from whole blood (N = 5 191).

Probe	Locus	Start, bp	End, bp	Sequence	P-value	T
11741958_a_at;264;163	Exon 5	154407569	154407594	TACAGACTACGGTTTGAGCTCAGAT	0.4850	0.70
11741958_a_at;314;329	Exon 5	154407576	154407601	TACGGTTTGAGCTCAGATATCGGGC	0.1068	1.61
11736510_a_at;323;134	Exon 7	154420604	154420629	CAGGAGTCCCTCCAGCTGAGAACGAG	0.7989	0.25
11741958_a_at;582;132	Exon 7	154420604	154420629	CAGGAGTCCCTCCAGCTGAGAACGAG	0.8337	0.21
11736510_a_at;201;497	Exon 7	154420613	154420638	TCCAGCTGAGAACGAGGTGTCCACC	0.3149	-1.01
11741958_a_at;202;497	Exon 7	154420613	154420638	TCCAGCTGAGAACGAGGTGTCCACC	0.8479	-0.19
11736510_a_at;484;717	Exon 8	154422428	154422453	GATTCTGCAAATGCGACAAGCCTCC	0.6635	0.44
11741958_a_at;483;717	Exon 8	154422428	154422453	GATTCTGCAAATGCGACAAGCCTCC	0.8186	0.23
11736510_a_at;609;718	3'-end	154437649	154437674	AAGACAAGCATGCATCCGCCGTACT	0.4188	-0.81
11741958_a_at;610;718	3'-end	154437649	154437674	AAGACAAGCATGCATCCGCCGTACT	0.6768	0.42
11741958_a_at;705;156	3'-end	154437682	154437707	CAGCTGGTCCCGGAGAGGCCTCGAC	0.4211	-0.80
11736510_a_at;58;615	3'-end	154437760	154437785	GGGTCTGACAATACCTCGAGCCACA	0.6003	-0.52
11736510_a_at;659;168	3'-end	154437779	154437804	GCCACAACCGACCAGATGCCAGGGA	0.9457	0.07
11736510_a_at;390;362	3'-end	154437807	154437832	ACGGAGCCCTTATGACATCAGCAAT	0.8324	-0.21
11736510_a_at;46;386	3'-end	154437834	154437859	AGACTACTTCTTCCCCAGATAGCTG	0.8752	0.16
11741959_x_at;218;13	3'-end	154438769	154438794	ATCAAAACGGTTTTACTGCAGCTTT	0.6968	0.39
11741959_x_at;586;417	3'-end	154438780	154438805	TTTACTGCAGCTTTGTTTGTGTCA	0.5539	0.59
11741959_x_at;7;323	3'-end	154438789	154438814	GCTTTGTTTGTGTGTCAGCTGAACCT	0.1111	1.59
11741959_x_at;109;540	3'-end	154438797	154438822	TGTTGTCAGCTGAACCTGGGTAACT	0.8790	-0.15
11741959_x_at;505;200	3'-end	154438903	154438928	CTGCTGACTGTTTTCTCTTGAGAGG	0.4423	-0.77
11741959_x_at;548;21	3'-end	154438916	154438941	TCTCTTGAGAGGGTGGAATATCCAA	0.5571	-0.59
11741959_x_at;361;694	3'-end	154438932	154438957	AATATCCAATATTCGCTGTGTGTCAGC	0.4901	0.69
11741959_x_at;267;582	3'-end	154438945	154438970	CGCTGTGTCAGCATAGAAGTAACCT	0.9922	-0.01
11741959_x_at;260;360	3'-end	154438986	154439011	AGCACCATAACTTTGTTTAGCCCAA	0.3022	1.03
11736509_x_at;495;603	3'-end	154439660	154439685	GTTCCCTGAGTTGATTCAGCTCTGC	0.2138	1.24
11736509_x_at;553;369	3'-end	154439733	154439758	ACTTCAGCTGACTTTTCTGTCCGAG	0.0031	2.96
11736509_x_at;545;104	3'-end	154439782	154439807	GGTTACCCAGTTAGCTCTCAAGTTA	0.9530	0.06
11736509_x_at;551;225	3'-end	154439795	154439820	GCTCTCAAGTTATCAGGGTATCCA	0.5074	0.66
11736509_x_at;308;15	3'-end	154439837	154439862	AAATCAGCCGTGTAACCATGGACCC	0.4184	-0.81
11736509_x_at;372;285	3'-end	154439953	154439978	CCATGTTTTGTTTACGGTTTTCCAG	0.5067	-0.66
11736509_x_at;61;280	3'-end	154439990	154440015	ACTGTCTCAGTAAGCCGTGATTTT	0.4114	-0.82
11736509_x_at;40;550	3'-end	154440035	154440060	GATTTTAGACCCTATTGCTGCTTGA	0.9373	-0.08

Supplementary Table 6. DNA sequence targeted by the two Illumina probes used to measure IL6R transcription levels in whole-blood (N = 851).

Probe	Locus	Sequence
ILMN_1754753	3'-end	GACCCTATTGCTGCTTGAGGCAACTCATCTTAGGTTGGCAAAAAGGCAGG
ILMN_1696394	Exon 9	TCTTCAGTACCACTGCCACATTCTGGTTGCTGGAGGGAGCCTGGCCTT

Supplementary Table 7. Primers used to amplify the rs4129267 and rs12083537 SNPs in the replication cohort (N = 354) using Sequenom MassARRAY.

SNP	Primer	Sequence
rs4129267	Reverse	ACGTTGGATGTGTGGTCTAGTCCCTACTTG
	Forward	ACGTTGGATGACTTGCTCAGCTTGGAGTGG
	Extension	TGAGTGGGGTCAATTCT
rs12083537	Reverse	ACGTTGGATGTCTACAAATACCCAGTGAGG
	Forward	ACGTTGGATGCAGGCACACTGATCCTGAC
	Extension	TCCAATTAGGGGAGTATTTGTTTACCC

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