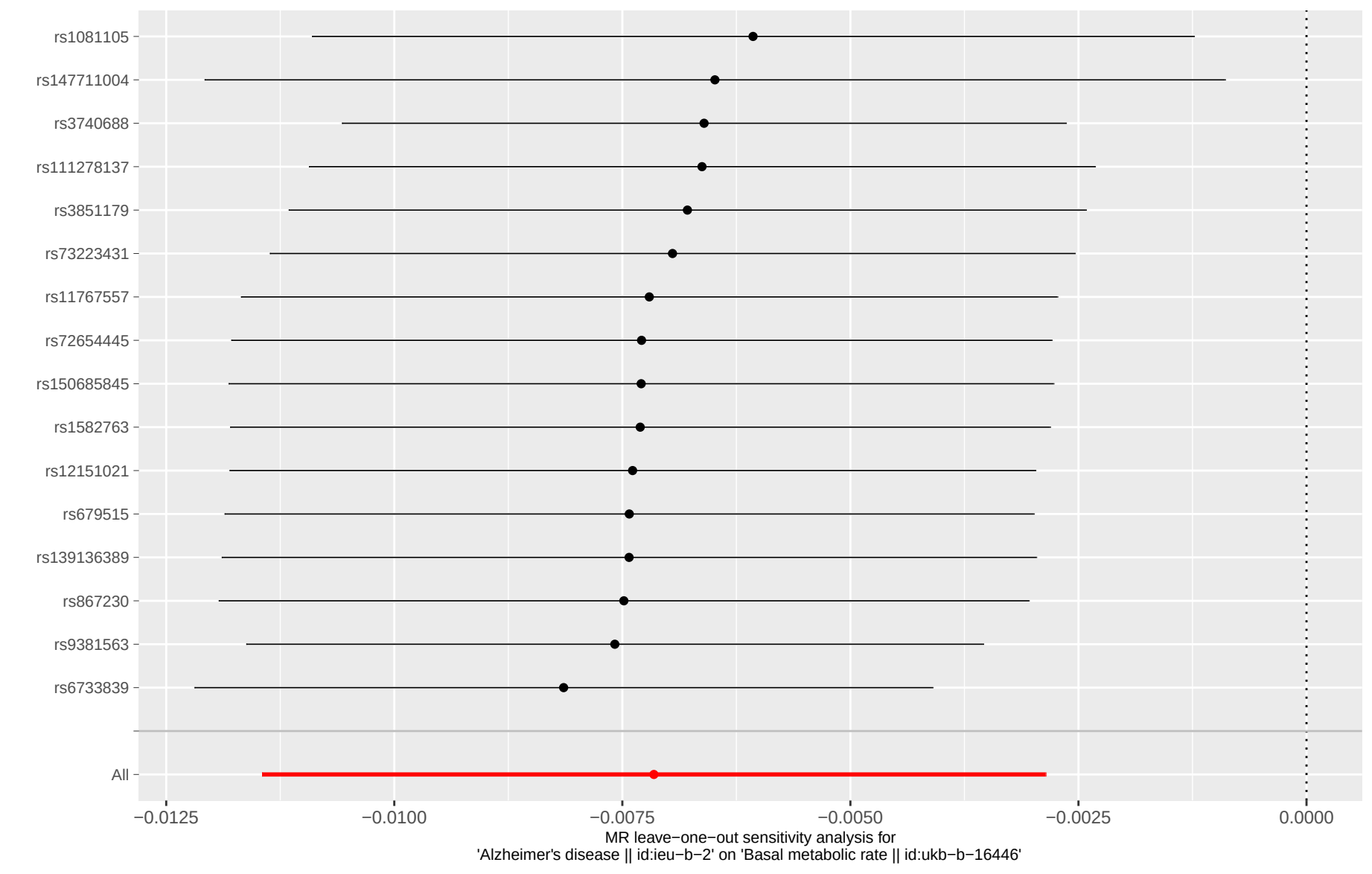
rs1081105
rs147711004
rs3740688
rs111278137
rs3851179
rs73223431
rs11767557
rs72654445
rs150685845
rs1582763
rs12151021
rs679515
rs139136389
rs867230
rs9381563
rs6733839
All
−0.0125
−0.0100
−0.0075
−0.0050
−0.0025
0.0000
MR leave−one−out sensitivity analysis for
'Alzheimer's disease || id:ieu−b−2' on 'Basal metabolic rate || id:ukb−b−16446'

−0.4
−0.3
−0.2
−0.1
0.0
MR leave−one−out sensitivity analysis for
'Basal metabolic rate || id:ukb−b−16446' on 'Alzheimer's disease || id:ieu−b−2'

MR leave−one−out sensitivity analysis for
'Standing height || id:ukb−b−10787' on 'Alzheimer's disease || id:ieu−b−2'

-0.2
-0.1
0.0
MR leave-one-out sensitivity analysis for
'Weight || id:ukb-b-12039' on 'Alzheimer's disease || id:ieu-b-2'

Supplementary Table 3 . Description of the consortium data

		Alzheimer's disease cases			Controls		
	Consortium	*N*	Percent female	Mean AAO (SD)	*N*	Percent female	Mean AAE (SD)
Discovery	ADGC	14,428	59.3	71.1 (17.3)	14,562	59.3	76.2 (9.9)
	CHARGE	2,137	67.3	82.6 (12)	13,474	55.8	76.7 (8.2)
	EADI	2,240	65	75.4 (9.1)	6,631	60.6	78.9 (7.0)
	GERAD	3,177	64	73.0 (0.2)	7,277	51.8	51.0 (0.1)
	N	21,982			41,944		

AAO, age at onset; AAE, age at examination.

Supplementary Table 4 . Demographic description of datasets within each consortium.

Consortium		AD cases			Controls		
		N	% female	Mean AA (SD)	*N*	% female	Mean AAE (SD)
ADGC	ACT	532	62.6	78.8 (12.7)	1,571	55.6	81.7 (5.9)
	ADC1	1,549	54.3	71.6 (11.0)	512	59.2	76.8 (8.8)
	ADC2	727	50.8	61.4 (29.5)	156	67.9	75.8 (7.9)
	ADC3	894	54.7	58.6 (32.8)	586	63	72.8 (17.5)
	ADC4	304	55.3	73.4 (7.0)	377	63.9	75.7 (8.1)
	ADC5	286	53.1	73.7 (7.0)	505	65.5	77.6 (9.0)
	ADC6	213	58.2	73.9 (7.6)	338	66.6	74.6 (9.0)
	ADNI	268	42.2	75.3 (7.1)	173	40.5	78.6 (5.5)
	BIOCARD	6	33.3	73.8 (6.1)	112	62.5	68.0 (5.5)
	CHAP	27	63	84.8 (7.6)	144	52.8	81.8 (6.6)
	EAS	9	44.4	85.2 (4.9)	141	41.1	84.4 (5.2)
	GenADA	666	56.9	72.8 (13.5)	712	63.9	74.2 (7.0)
	MAYO	658	57.4	73.6 (4.8)	1,046	51.1	72.9 (4.4)
	MIRAGE	491	63.3	69.9 (11.5)	738	58.8	70.8 (12.1)
	MTC	256	57	73.6 (11.8)	189	61.4	70.9 (9.7)
	NIALOAD	1,798	65	73.1 (9.3)	1,568	60.2	73.8 (9.3)
	NBB	80	71.3	74.5 (7.5)	48	56.3	81.5 (9.4)
	OHSU	132	62.1	85.9 (5.7)	153	54.9	83.9 (7.6)
	PFIZER	696	53.7	73.7 (5.0)	762	54.1	77.2 (4.9)
	RMAYO	13	23.1	78.5 (9.0)	233	41.6	79.2 (5.8)
	ROSMAP	295	70.5	85.6 (6.2)	769	72	82.2 (7.1)
	ROSMAP2	59	78	81.9 (6.9)	217	76	80.8 (7.2)
	TARC1	323	61.6	74.0 (7.1)	181	65.2	73.9 (8.2)
	TGEN2	668	64.8	67.2 (22.9)	365	48.5	80.0 (8.7)
	UKS	596	57.4	72.2 (6.6)	170	51.2	64.1 (3.0)
	UMCWR MSSM	1,177	64.5	71.1 (17.4)	1,126	61.3	73.5 (10.6)
	UPITT	1,255	62.9	66.8 (22.4)	829	63.3	75.5 (6.0)
	WASHU	339	57.2	69.1 (21.5)	187	60.4	76.9 (8.4)
	WASHU2	38	57.9	73.4 (7.3)	94	46.8	51.7 (35.2)
	WHICAP	73	72.6	83.9 (7.8)	560	60.4	81.7 (6.7)
CHARGE	AGES	95	51.6	81.5 (0.1)	2,708	59.2	75.7 (0.1)
	ASPS	277	57.8	76.4 (8.3)	169	58	66.4 (10.8)
	CHS	450	66	81.9 (5.2)	1,702	60.3	81.1 (5.2)
	FHS	330	64	86.1 (7.2)	3,910	49	74.0 (9.5)
	ROTTER DAM	985	73.2	83.5 (6.6)	4,985	57.6	78.0 (7.6)

EADI		2,240	65	75.4 (9.1)	6,631	60.6	78.9 (7.0)
GERAD	**MRC**	1,008	70.3	80.9 (6.5)	873	61.6	75.9 (6.3)
	ARUK	939	61	76.6 (9.6)	82	59.8	77.9 (7.6)
	BONN	551	63.7	72.9 (8.3)	37	64.9	79.5 (3.6)
	WASHU	423	56	82.1 (9.0)	156	65.4	78.5 (9.7)
	NIMH	127	63	80.1 (6.1)	-	-	-
	UCL:PRION	82	59.8	63.6 (9.9)	-	-	-
	UCL:LASER	47	74.5	80.6(7.9)	-	-	-
	1958BC	-	-	-	5,342	49.8	45.0 (0.0)
	KORA	-	-	-	434	49.1	56.0 (7.2)
	HNR	-	-	-	353	52.9	54.6 (5.3)
	MAYO	-	-	-	-	-	-
TOTALS		**21,982**			**41,944**		

Supplementary Table 5 . SNPs related to basal metabolic rate

	SNP	effect_allele.exposure	other_allele.exposure	chr	pos	pval
1	rs10020631	A	G	4	69353863	3.10E-08
2	rs10058393	T	C	5	277617	5.90E-11
3	rs1008158	G	A	9	113828811	7.30E-10
4	rs10172196	A	G	2	36780952	8.80E-18
5	rs10176567	T	C	2	58885575	8.00E-09
6	rs10202845	G	A	2	42575820	1.50E-16
7	rs10236214	T	C	7	150668070	1.00E-45
8	rs10248298	A	C	7	121963813	3.10E-20
9	rs10260993	G	T	7	55884295	7.60E-09
10	rs10269774	A	G	7	92253972	1.60E-77
11	rs10401784	A	C	19	3445721	1.10E-14
12	rs10404726	T	C	19	18834514	2.90E-11
13	rs1045475	G	A	16	4015316	9.90E-33
14	rs10457469	A	G	6	126083658	9.30E-29
15	rs1047891	A	C	2	211540507	1.30E-33
16	rs10511111	C	T	3	80599757	2.30E-10
17	rs1064213	A	G	2	198950240	2.80E-18
18	rs10748128	T	G	12	69827658	1.20E-17
19	rs10773172	A	G	12	122939655	2.80E-38
20	rs10775348	G	A	16	88806348	5.70E-19
21	rs10775406	G	A	17	46197755	5.80E-11
22	rs10777860	A	G	12	97792792	6.00E-17
23	rs10803955	G	A	2	183233310	1.70E-16
24	rs10822373	T	C	10	66697966	3.20E-08
25	rs10843397	T	C	12	29529523	1.40E-09
26	rs10870597	G	A	13	114999636	8.50E-13
27	rs10886477	A	G	10	121175524	1.00E-08
28	rs10914462	G	A	1	32125943	2.40E-15
29	rs10938397	G	A	4	45182527	3.50E-28
30	rs10945541	G	A	6	158740218	3.90E-11
31	rs10979612	C	T	9	111687379	3.90E-13
32	rs10995366	A	G	10	52772113	1.50E-10
33	rs11014285	A	G	10	25178864	7.30E-25
34	rs11030112	A	G	11	27705188	3.30E-42
35	rs11049684	T	C	12	28665359	5.10E-14
36	rs11065015	T	C	12	120520863	1.10E-14
37	rs11065979	T	C	12	112059557	3.30E-25
38	rs1108548	G	A	1	218634787	2.60E-25
39	rs11097755	C	T	4	102709308	3.50E-12
40	rs111365325	T	C	5	170865229	1.10E-20
41	rs11142700	C	T	9	73757155	2.10E-10
42	rs11153171	T	C	6	109653825	1.40E-21
43	rs111598585	T	C	4	171635471	9.60E-09
44	rs11160601	T	C	14	101186641	9.90E-14
45	rs11175890	T	C	12	66118509	5.70E-09
46	rs11196652	A	G	10	115949262	4.60E-10
47	rs11205354	A	C	1	150249101	3.10E-09
48	rs112069922	T	C	4	1034997	4.70E-17
49	rs11217843	G	A	11	120239937	2.30E-13
50	rs11243202	C	T	6	7719940	6.30E-42
51	rs11245450	A	G	10	126658075	6.80E-17
52	rs112544217	T	C	2	20222686	5.40E-09
53	rs112560164	A	G	14	93112924	3.70E-11
54	rs112685832	A	C	1	155822629	7.30E-11

55	rs112758380	A	G	11	14302756	1.30E-10
56	rs112875651	A	G	8	126506694	2.10E-19
57	rs112957890	G	A	14	36220876	5.40E-12
58	rs114056237	A	G	6	41877671	1.90E-25
59	rs114177791	T	G	17	78555512	1.20E-12
60	rs115056380	A	G	1	111338672	2.80E-10
61	rs115179432	G	A	2	33348679	6.20E-19
62	rs11525873	C	T	7	138817193	6.30E-11
63	rs11578046	A	G	1	23506521	2.40E-21
64	rs115946508	A	C	7	150497496	2.70E-10
65	rs11611651	A	G	12	133380790	9.70E-14
66	rs11616283	C	T	13	21493853	3.60E-10
67	rs116165844	T	G	20	62610556	9.30E-09
68	rs116337081	T	C	2	183954625	3.70E-08
69	rs11663903	A	G	18	32762592	6.40E-09
70	rs11684531	G	A	2	219835489	1.60E-08
71	rs11688707	A	G	2	241843564	1.30E-09
72	rs11689727	A	C	2	25458100	3.20E-17
73	rs117034105	C	T	14	53531085	2.60E-08
74	rs11709402	G	A	3	131551027	1.10E-15
75	rs11739036	A	G	5	32723478	4.50E-17
76	rs117451679	G	A	12	17245591	2.80E-10
77	rs117543413	T	C	10	79543740	2.40E-14
78	rs11756675	G	A	6	120067932	1.50E-08
79	rs1176314	G	T	13	81221014	5.10E-09
80	rs11777007	T	C	8	10801857	1.10E-16
81	rs11785562	A	G	8	23391493	5.60E-14
82	rs11794152	G	A	9	23345347	4.20E-16
83	rs1179905	G	A	6	90322922	2.40E-11
84	rs118173451	C	T	22	28356600	6.80E-09
85	rs11833839	T	C	12	132561463	3.40E-10
86	rs11880992	A	G	19	2176403	4.10E-24
87	rs12047401	G	T	1	49364360	2.30E-08
88	rs1205593	C	T	1	11252716	4.10E-25
89	rs12083887	G	A	1	118881689	4.30E-08
90	rs12095997	T	C	1	51391845	1.20E-21
91	rs12140153	T	G	1	62579891	8.70E-18
92	rs12156265	A	G	8	144848756	3.20E-10
93	rs12188627	G	A	5	60720682	7.20E-16
94	rs12199246	A	G	6	41999809	1.40E-09
95	rs12200061	A	G	6	83487558	4.40E-09
96	rs12209223	A	C	6	76164589	1.70E-12
97	rs12213070	A	G	6	12131542	6.00E-12
98	rs12216497	T	C	6	19028623	9.00E-18
99	rs1228024	A	C	11	47951353	1.50E-13
100	rs12294689	C	A	11	12890358	2.80E-10
101	rs12364470	G	T	11	134601012	9.10E-11
102	rs12427047	T	C	12	90213070	8.00E-14
103	rs12553221	A	G	9	37234008	1.60E-08
104	rs1260326	C	T	2	27730940	2.50E-42
105	rs12657771	A	G	5	36787962	4.80E-23
106	rs12694042	T	C	2	207029825	3.90E-10
107	rs12713004	G	A	2	23896049	3.70E-27
108	rs12731187	T	C	1	202013757	1.20E-09
109	rs12731454	G	A	1	97067652	1.70E-15
110	rs12763284	G	A	10	104508202	2.70E-21

111	rs12764498	C	T	10	5042294	2.20E-12
112	rs12820906	G	A	12	123493123	3.60E-15
113	rs12879423	G	A	14	25927832	8.30E-28
114	rs12888955	A	G	14	103256877	1.30E-10
115	rs12889702	C	A	14	42894143	5.70E-12
116	rs12907384	C	T	15	86276000	4.70E-17
117	rs12908182	T	C	15	62186447	2.80E-15
118	rs12934835	G	A	16	15139051	5.60E-19
119	rs1296328	C	A	4	137083193	2.30E-14
120	rs13043303	A	G	20	51098456	1.00E-32
121	rs13059004	C	A	3	38601237	4.60E-12
122	rs13085472	C	T	3	171129859	5.70E-10
123	rs13125807	T	C	4	54351220	4.20E-11
124	rs13185520	A	G	5	137807260	1.70E-08
125	rs13225455	C	A	7	103457789	4.00E-08
126	rs13244614	A	C	7	72973854	2.90E-16
127	rs13299559	T	C	9	128041828	7.10E-15
128	rs13430869	T	G	2	218146818	8.00E-18
129	rs1351394	C	T	12	66351826	9.30E-84
130	rs1374370	A	G	2	85818273	4.00E-13
131	rs1407031	T	C	20	6542634	1.90E-09
132	rs1412234	C	T	9	28410683	4.80E-19
133	rs141729694	T	C	5	87999371	2.00E-19
134	rs1418433	A	G	6	44752568	7.00E-10
135	rs1421035	T	C	10	131136401	2.60E-09
136	rs143384	G	A	20	34025756	#######
137	rs1443536	G	A	4	82174165	2.70E-18
138	rs1447498	G	A	2	205388729	3.90E-09
139	rs145391487	A	G	14	35659519	2.60E-10
140	rs146851424	C	A	13	50377910	5.40E-39
141	rs147110934	T	G	19	55993436	1.20E-12
142	rs147233090	T	C	15	44028047	5.10E-11
143	rs148662000	T	G	1	228721530	1.90E-08
144	rs1521624	A	C	15	79412399	7.90E-14
145	rs1524445	T	C	7	113035833	1.50E-15
146	rs1542224	C	T	2	223963874	3.00E-18
147	rs1553065	A	G	4	115036831	1.30E-09
148	rs1582931	A	G	5	122657199	6.90E-47
149	rs1640779	A	G	16	2270536	1.20E-23
150	rs1657222	A	G	10	34841918	1.90E-10
151	rs16891847	C	T	6	39260119	4.30E-08
152	rs16916881	A	C	8	95566270	1.30E-12
153	rs16942324	A	C	15	89383854	9.30E-20
154	rs16996657	C	T	20	15816236	4.90E-10
155	rs17024393	C	T	1	110154688	2.30E-15
156	rs17042011	T	C	4	111604727	2.50E-08
157	rs17115481	A	G	5	153358226	9.10E-12
158	rs17157112	G	T	7	28779946	9.00E-09
159	rs17197114	C	T	14	21894526	4.60E-11
160	rs17246129	A	G	2	227259964	2.20E-15
161	rs17363646	G	A	1	86823503	6.00E-12
162	rs17400325	C	T	2	178565913	4.80E-11
163	rs17443541	C	T	2	200402624	1.40E-11
164	rs17454077	G	A	4	87631532	1.60E-12
165	rs17491275	G	T	1	39672545	7.40E-21
166	rs1780673	A	G	20	35758359	7.70E-15

167	rs17828687	A	C	8	73470861	1.00E-16
168	rs1813212	G	A	11	89301382	1.50E-12
169	rs1837367	A	G	2	111874551	3.50E-12
170	rs1910466	C	T	3	147086268	3.30E-10
171	rs1923766	G	T	1	90063846	3.00E-08
172	rs1927635	C	T	9	16461905	3.10E-12
173	rs1941697	A	G	18	31251276	7.00E-11
174	rs1966818	A	G	8	6279958	1.60E-08
175	rs1971955	G	A	12	122420437	6.30E-14
176	rs1984119	C	T	9	98368761	1.60E-18
177	rs2005172	C	A	17	62006497	9.50E-53
178	rs2016469	A	G	3	108023965	3.30E-10
179	rs2034923	C	A	12	41883096	3.00E-13
180	rs2071519	G	A	8	120435908	1.60E-16
181	rs2071951	C	T	16	783004	1.60E-16
182	rs2077218	A	G	10	96071561	4.30E-16
183	rs2093147	C	T	20	9033462	2.20E-08
184	rs2101975	G	A	4	106216667	5.20E-34
185	rs2102278	G	A	4	52818664	1.40E-15
186	rs2122823	T	C	7	25939161	1.10E-10
187	rs212526	C	T	1	21584941	4.80E-12
188	rs2140046	C	T	2	169706079	4.90E-17
189	rs2163832	C	T	19	10745764	9.20E-22
190	rs2192158	G	A	4	55510862	3.80E-09
191	rs2197563	A	G	2	233711046	3.50E-14
192	rs2225226	T	C	13	51127270	5.10E-72
193	rs2229840	T	C	12	124826462	6.00E-30
194	rs223942	G	A	4	12912629	2.00E-09
195	rs224048	A	G	10	64491549	3.50E-08
196	rs225111	A	C	1	8124315	1.80E-10
197	rs2252720	T	C	20	21223663	2.70E-19
198	rs2276190	A	G	18	63430340	1.00E-09
199	rs2281175	C	T	1	1665702	2.00E-16
200	rs2287214	G	A	12	108090518	2.40E-08
201	rs2293176	A	G	7	140244627	3.10E-10
202	rs2293888	T	C	8	116522025	8.10E-26
203	rs2296316	C	T	14	65520246	4.20E-14
204	rs2303792	T	C	16	70531366	2.90E-08
205	rs2307111	C	T	5	75003678	1.10E-44
206	rs236587	C	T	17	68203915	8.80E-09
207	rs2439823	G	A	10	99778226	3.50E-11
208	rs244711	T	C	5	176509193	5.80E-28
209	rs247008	G	A	5	131447104	1.90E-20
210	rs2521349	A	G	17	67503501	1.30E-08
211	rs252938	T	C	5	5496480	4.00E-11
212	rs2533879	A	G	7	2859847	1.30E-50
213	rs254963	G	A	5	171224403	3.20E-10
214	rs2568958	A	G	1	72765116	7.80E-17
215	rs2569993	C	T	3	12926096	1.50E-10
216	rs2578246	A	G	9	90835589	1.00E-09
217	rs2611732	G	A	5	95855576	2.90E-09
218	rs2615075	G	A	1	225934295	2.60E-14
219	rs2627692	T	C	4	88649369	1.30E-13
220	rs2650965	G	A	20	6709838	2.50E-10
221	rs2678204	G	T	1	201800511	2.00E-23
222	rs2699433	T	C	4	3482554	2.20E-11

223	rs2744956	C	T	6	34618937	#######
224	rs2756895	T	C	9	35686564	3.80E-10
225	rs2789366	A	G	1	235508270	1.00E-11
226	rs281385	G	A	19	49217261	7.30E-09
227	rs284315	G	A	1	10734800	2.60E-09
228	rs284662	C	T	19	41932275	1.50E-12
229	rs28605759	A	G	1	38399816	2.90E-11
230	rs28620532	G	A	9	98216876	7.70E-35
231	rs2866719	T	C	7	70106061	9.50E-12
232	rs2897968	A	G	12	46823272	6.40E-28
233	rs2900208	A	C	12	11878464	8.50E-23
234	rs29946	C	T	19	34299865	7.00E-09
235	rs310796	T	G	12	77453226	6.20E-16
236	rs3110496	G	A	17	27917771	9.00E-10
237	rs3116201	A	G	2	233074205	1.40E-16
238	rs31211	A	G	5	134363145	1.30E-16
239	rs3131014	A	G	6	31116627	3.60E-28
240	rs34017457	A	G	16	67166731	9.00E-12
241	rs34055910	G	A	17	64460104	2.50E-08
242	rs34147411	T	C	16	68081246	5.00E-12
243	rs34268501	G	A	8	22462852	5.10E-09
244	rs34373881	A	G	3	20432033	2.30E-08
245	rs34517439	A	C	1	78450517	3.20E-86
246	rs34693680	T	C	3	98665549	1.80E-13
247	rs34776209	T	C	7	23513093	4.90E-27
248	rs34825238	T	G	12	103328352	4.30E-09
249	rs34848742	G	T	4	123828042	9.70E-20
250	rs34879158	C	A	20	32300634	5.10E-47
251	rs35050648	T	G	19	46991243	7.80E-09
252	rs35251247	A	G	11	43878459	4.70E-18
253	rs35467921	T	C	16	30048553	2.10E-66
254	rs35506085	A	G	11	2165576	6.20E-31
255	rs35626515	A	C	16	28649651	3.40E-28
256	rs35665085	A	G	22	17625915	2.50E-08
257	rs35679149	G	A	6	43604167	1.90E-10
258	rs357486	C	T	3	153885503	4.30E-17
259	rs35874463	G	A	15	67457698	7.70E-12
260	rs36000545	G	A	17	79093822	2.40E-34
261	rs36012032	A	C	3	52814709	1.40E-15
262	rs36100359	A	G	14	21578007	7.10E-09
263	rs365352	A	G	5	77401152	7.30E-25
264	rs36695	A	G	5	127549187	2.80E-10
265	rs3730071	A	C	12	49168798	2.70E-11
266	rs3740591	T	C	10	70287303	2.70E-16
267	rs3759094	T	C	12	56497903	1.70E-17
268	rs3765351	T	C	1	22445991	3.20E-13
269	rs3778934	C	A	7	39445385	9.00E-10
270	rs3800963	A	G	7	17979793	2.80E-08
271	rs3810291	A	G	19	47569003	1.70E-38
272	rs3812550	G	A	9	139253839	4.60E-08
273	rs3822742	A	C	5	139065988	1.10E-26
274	rs3845344	T	C	1	75001480	3.70E-12
275	rs3853252	A	G	6	152170247	2.80E-33
276	rs3925	A	G	8	38281658	4.80E-11
277	rs41311445	C	A	22	42070374	3.20E-28
278	rs4132132	C	T	4	31001301	4.50E-12

279	rs4240326	G	A	4	145839264	5.00E-62
280	rs4253755	A	G	22	46615376	7.80E-09
281	rs4282339	A	G	5	168256240	2.00E-30
282	rs4369779	C	T	18	20735408	2.50E-59
283	rs4525525	T	G	17	1866892	1.20E-12
284	rs4556997	A	C	2	100814858	1.50E-13
285	rs4567604	T	G	13	59204270	7.10E-10
286	rs4619406	C	T	16	4879766	7.90E-16
287	rs4635681	G	A	3	152310614	1.90E-10
288	rs4648626	A	C	1	2200390	1.10E-09
289	rs4653016	A	C	1	33776441	4.30E-27
290	rs4740292	G	A	9	134468311	2.20E-09
291	rs475390	A	G	1	41570459	2.10E-40
292	rs4819021	C	T	21	46466927	5.10E-11
293	rs4858940	C	T	3	88254820	3.10E-18
294	rs4865465	A	G	4	1745486	2.10E-13
295	rs4883723	A	G	13	54084032	1.70E-18
296	rs4946936	C	T	6	109003321	1.60E-51
297	rs4974072	A	G	3	41222586	1.70E-17
298	rs4980826	A	C	12	578349	4.10E-09
299	rs5019542	T	C	6	51738352	1.70E-12
300	rs505575	C	T	5	111286124	5.30E-12
301	rs508347	C	T	7	28212824	1.80E-16
302	rs532499	C	T	13	30165465	3.20E-10
303	rs543874	G	A	1	177889480	1.40E-72
304	rs55674305	A	G	8	89435868	9.40E-14
305	rs55726687	A	G	12	991306	3.60E-26
306	rs55831773	T	C	17	7559037	2.30E-20
307	rs55854145	C	A	18	45928049	1.50E-08
308	rs56094641	G	A	16	53806453	#######
309	rs56130943	C	A	14	105906522	1.50E-08
310	rs56383938	G	A	7	74097622	3.50E-11
311	rs57126421	G	A	18	2656989	1.50E-13
312	rs573455	G	A	11	117267884	2.50E-08
313	rs5752989	A	G	22	30365780	1.10E-14
314	rs57636386	C	T	18	58048295	3.00E-24
315	rs578366	G	A	6	81591034	2.10E-14
316	rs58584712	A	G	2	112249583	9.30E-09
317	rs599004	T	C	6	140439740	7.70E-14
318	rs59985551	T	C	2	56106928	2.80E-35
319	rs60077625	A	G	1	172098794	3.80E-24
320	rs6130953	G	A	20	44495988	1.10E-08
321	rs6136938	A	G	20	20058992	8.00E-13
322	rs6142059	C	T	20	32544327	1.80E-15
323	rs61628776	G	A	9	95515900	1.70E-15
324	rs61729527	T	C	8	77761919	1.30E-15
325	rs61828917	T	C	1	173580303	2.70E-08
326	rs61869763	T	C	11	2813345	3.40E-16
327	rs62246311	A	G	3	9507257	6.90E-12
328	rs62372052	G	A	5	42724294	1.40E-35
329	rs62460522	T	C	7	44892742	1.20E-08
330	rs62466118	A	G	7	92716556	1.50E-09
331	rs62515437	T	G	8	57160328	3.00E-32
332	rs62621197	T	C	19	8670147	1.20E-23
333	rs62621812	A	G	7	127015083	2.10E-17
334	rs6437277	G	A	2	242665847	1.00E-14

335	rs6493780	G	A	15	55656840	1.70E-11
336	rs655598	A	G	1	190306342	1.80E-14
337	rs6563808	C	T	13	40766662	1.90E-10
338	rs6567160	C	T	18	57829135	#######
339	rs6570509	T	G	6	142716286	1.60E-23
340	rs6575340	A	G	14	94023972	2.10E-12
341	rs6585827	A	G	10	124165615	4.20E-20
342	rs6675441	A	G	1	214659762	1.70E-15
343	rs6681795	G	A	1	56583274	1.50E-21
344	rs6711568	G	T	2	59291172	2.20E-15
345	rs67141907	T	C	13	42805360	3.80E-10
346	rs6743060	A	C	2	629510	#######
347	rs67551338	T	C	12	3393100	1.30E-17
348	rs676105	C	T	11	30443688	7.40E-24
349	rs6762578	A	G	3	128992047	3.60E-23
350	rs6762851	C	T	3	56686329	3.30E-18
351	rs6772164	A	C	3	196078149	1.20E-11
352	rs6777784	T	G	3	62376645	6.80E-09
353	rs6779752	A	G	3	85663849	5.50E-22
354	rs6792892	C	T	3	49995518	8.80E-31
355	rs68106312	A	G	17	47065115	4.60E-18
356	rs6821305	C	A	4	122713863	2.50E-25
357	rs6874142	G	T	5	172753555	1.90E-17
358	rs6951489	G	A	7	76639839	1.40E-21
359	rs695922	G	A	5	53385529	4.50E-08
360	rs6984820	T	C	8	144993324	1.60E-13
361	rs7033487	C	T	9	119129257	4.60E-42
362	rs703593	G	A	12	103064247	1.00E-18
363	rs7109581	G	T	11	93180531	4.30E-08
364	rs7111235	C	T	11	133658661	7.30E-10
365	rs7129320	A	G	11	68388220	3.30E-38
366	rs7132908	A	G	12	50263148	2.20E-42
367	rs7134283	A	G	12	24071748	4.40E-17
368	rs71385734	G	T	16	2160503	2.70E-42
369	rs7141420	T	C	14	79899454	9.60E-29
370	rs71423263	G	T	2	144024781	8.20E-13
371	rs7188009	A	G	16	81660642	1.10E-10
372	rs7223535	A	G	17	29211667	1.90E-63
373	rs7229520	A	G	18	46516468	3.70E-13
374	rs723149	G	A	7	46577056	3.30E-17
375	rs724016	G	A	3	141105570	#######
376	rs7245985	G	T	19	30710410	4.00E-12
377	rs726547	A	G	15	51530167	1.60E-11
378	rs72656010	C	T	8	57122215	1.10E-75
379	rs72722756	C	T	8	129186110	1.50E-08
380	rs72862345	G	T	17	80527430	3.50E-08
381	rs72885917	C	A	2	172416376	4.10E-41
382	rs72892910	T	G	6	50816887	5.40E-41
383	rs73004967	G	A	19	19717056	1.70E-11
384	rs7301341	C	T	12	94083105	8.00E-12
385	rs73013411	A	C	6	164126233	2.70E-13
386	rs73052033	C	T	3	185828465	1.10E-22
387	rs7312646	C	A	12	102388920	6.80E-15
388	rs73175572	G	A	3	185490184	1.00E-41
389	rs73189390	A	G	21	17383170	1.50E-08
390	rs7321045	A	G	13	97034410	3.30E-12

391	rs73601548	T	C	10	18549889	4.40E-13
392	rs73619441	G	T	20	61564901	8.40E-12
393	rs74032128	G	A	15	99495351	7.30E-11
394	rs74048171	A	C	11	2093603	1.60E-12
395	rs744205	A	G	11	69929677	3.00E-16
396	rs74494415	T	C	18	74972138	7.70E-14
397	rs7513326	A	G	1	159895536	2.10E-08
398	rs7519259	A	G	1	66434743	2.10E-09
399	rs752070	G	A	2	74824970	2.90E-09
400	rs75581912	A	G	7	50604019	8.50E-18
401	rs757608	G	A	17	59497277	4.50E-27
402	rs757833	A	C	7	139734697	1.80E-08
403	rs76067562	T	G	9	99500978	1.10E-11
404	rs7612882	A	G	3	30078634	3.00E-09
405	rs7613368	C	T	3	61267398	1.80E-10
406	rs7671110	T	C	4	17874089	3.40E-63
407	rs76798800	T	G	1	154994978	9.60E-53
408	rs7683836	A	G	4	180167906	3.10E-09
409	rs77165542	T	C	2	430975	3.10E-71
410	rs7728690	T	C	5	88411214	4.70E-15
411	rs7731023	G	A	5	36181627	7.70E-10
412	rs7755185	G	A	6	152339615	6.90E-10
413	rs7780752	C	T	7	93241640	2.40E-21
414	rs77848106	A	C	1	107972362	6.20E-12
415	rs78149371	G	A	3	33260875	2.20E-08
416	rs78287937	G	T	11	64773101	8.40E-09
417	rs78378222	G	T	17	7571752	2.00E-40
418	rs7912286	G	A	10	114693230	7.50E-12
419	rs7927350	A	C	11	9476419	1.10E-14
420	rs7933085	G	A	11	130796248	1.30E-09
421	rs7952436	T	C	11	67024534	8.10E-48
422	rs7994783	G	T	13	41661922	1.70E-09
423	rs8002779	A	G	13	92015977	3.10E-08
424	rs8006178	C	A	14	73358764	2.10E-08
425	rs8017780	A	C	14	103987305	1.70E-09
426	rs8024244	A	G	15	75822230	2.80E-10
427	rs8034033	A	C	15	38367091	2.90E-16
428	rs8042545	A	G	15	66995323	8.90E-18
429	rs8064547	A	G	17	36951278	1.40E-11
430	rs8070437	T	C	17	43257270	3.10E-20
431	rs8074074	T	C	17	17407816	1.80E-10
432	rs822551	G	A	7	148650375	6.90E-14
433	rs822688	T	C	12	53493387	2.60E-13
434	rs823118	T	C	1	205723572	1.60E-24
435	rs836511	G	A	7	6458319	2.70E-12
436	rs876672	G	A	16	81571600	1.10E-08
437	rs878347	C	T	9	133431902	2.40E-10
438	rs894360	C	T	8	135601194	1.10E-44
439	rs9291926	G	T	5	67599656	1.00E-21
440	rs9327336	C	T	5	123990270	4.60E-11
441	rs9350850	C	T	6	81050236	1.00E-20
442	rs9379084	A	G	6	7231843	2.30E-12
443	rs9512696	G	A	13	28012527	3.60E-14
444	rs9540493	G	A	13	66205704	1.90E-13
445	rs9634212	A	C	12	93993266	1.30E-48
446	rs9788443	C	T	14	23878279	3.10E-10

447	rs9800418	C	T	5	77641008	3.60E-09
448	rs9888533	T	C	13	107854612	3.90E-08
449	rs9951619	G	T	18	56882326	2.80E-17
450	rs9960619	T	C	18	33040095	1.90E-11
451	rs9985795	C	T	4	135213286	3.70E-09

Supplementary Table 6. SNPs related to AD

	SNP	effect_allele.exposure	other_allele.exposure	chr	pos	pval
1	rs1081105	C	A	19	45412955	#######
2	rs11127813	A	G	19	45215081	3.20E-11
3	rs11767557	C	T	7	143109139	1.56E-08
4	rs12151021	G	A	19	1050874	2.56E-10
5	rs13913638	T	C	19	45427136	6.43E-09
6	rs14771100	A	G	19	45337918	#######
7	rs15068584	G	A	19	45675180	6.62E-18
8	rs1582763	A	G	11	60021948	1.19E-16
9	rs3740688	T	G	11	47380340	9.70E-11
10	rs3851179	C	T	11	85868640	5.81E-16
11	rs6733839	T	C	2	127892810	4.02E-28
12	rs679515	C	T	1	207750568	1.55E-16
13	rs72654445	A	G	19	45417200	2.27E-11
14	rs73223431	T	C	8	27219987	8.34E-10
15	rs867230	A	C	8	27468503	3.49E-17
16	rs9381563	T	C	6	47432637	2.93E-08