

**Supplementary Table 6.** List of instrumental SNPs to calculate the effect estimates of BMI for PD

Instrumental SNP	Effect allele	CHR	Gene	Exposure (BMI)			Proxy-SNP used	Outcome (PD)		
				Beta	SE	MAF		Beta	SE	MAF
rs11030104	T	11	<i>BDNF, BDNF-AS</i>	-0.048	0.005	0.45	Yes	0.062	0.170	0.449
rs12463617	G	2	<i>TMEM18, FAM150B</i>	-0.063	0.009	0.09	Yes	-0.073	0.166	0.086
rs1558902	A	16	<i>FTO</i>	0.076	0.007	0.15	Yes	-0.042	0.159	0.122
rs2237892	T	11	<i>KCNQ1</i>	0.033	0.005	0.36	No	0.061	0.171	0.379
rs2535633	G	3	<i>ITIH4, MUSTN1</i>	0.031	0.006	0.41	Yes	0.089	0.191	0.439
rs574367	T	1	<i>LOC101928778, SEC16B</i>	0.058	0.006	0.21	Yes	-0.020	0.130	0.246
rs591166	A	18	<i>MC4R, PMAIP1</i>	0.046	0.006	0.24	Yes	0.060	0.179	0.278
rs6545814	G	2	<i>ADCY3</i>	0.033	0.005	0.45	Yes	0.040	0.152	0.446

SNP, single nucleotide polymorphism; BMI, body mass index; PD, Parkinson's disease; SE, standard error; MAF, minor allele frequency; CHR, chromosome.