Supplemental Table 1: List of 15 common mitochondrial SNPs (minor allele frequency [MAF]

≥10%) used in the study

| Mitochondrial SNP	Position	Gene	Minor allele	Common allele	MAF
rs28358576	1811	MT-RNR2	G	A	13.9%
rs2854128	2706	MT-RNR2	A	G	43.5%
rs3928306	3010	MT-RNR2	A	G	23.8%
rs2015062	7028	MT-CO1	C	T	43.3%
rs28358279	10463	MT-TR	G	A	11.0%
rs3915952	11251	MT-ND4	C	T	21.8%
rs2853493	11467	MT-ND4	G	A	22.3%
rs2853495	11719	MT-ND4	C	T	47.9%
rs2853498	12308	MT-TL2	G	A	22.4%
rs28359172	12612	MT-ND5	C	T	10.8%
rs3899498	13368	MT-ND5	T	C	10.5%
rs28359178	13708	MT-ND5	A	G	13.1%
rs28357682	14905	MT-CytB	T	C	10.5%
rs3088309	15452	MT-CytB	T	G	20.9%
rs527236210	15607	MT-CytB	G	A	10.4%

Supplemental Table 2: Gene-set analysis of mtSNP interactions with mitochondria-related nuclear genes (as compared with non-mitochondrial-related genes) for risk of bipolar disorder (BD) and early-onset BD for each mitochondrial SNP. The gene-set analysis is based on association results for the 1df interaction tests.

| Mitochondrial SNP	Position	Risk of BD			Early-onset BD		
		Observed number of genes above the cutoff*	Expected number of genes above the cutoff*	Gene-set p-value*	Observed number of genes above the cutoff*	Expected number of genes above the cutoff*	Gene-set p-value*
rs28358576	1811	203	219	0.87	216	218	0.46
rs2854128	2706	210	221	0.73	212	219	0.62
rs3928306	3010	211	220	0.74	213	219	0.59
rs2015062	7028	222	220	0.33	213	220	0.65
rs28358279	10463	209	218	0.69	230	221	0.13
rs3915952	11251	214	221	0.64	218	219	0.47
rs2853493	11467	209	218	0.70	197	217	0.94
rs2853495	11719	208	222	0.82	202	219	0.89
rs2853498	12308	204	218	0.81	195	219	0.97
rs28359172	12612	209	220	0.75	203	219	0.86
rs3899498	13368	222	219	0.32	235	219	**0.05**
rs28359178	13708	240	217	**0.02**	202	221	0.92
rs28357682	14905	231	219	0.11	236	220	**0.05**
rs3088309	15452	217	221	0.54	220	219	0.38
rs527236210	15607	228	219	0.17	232	220	0.10

* Enrichment was tested with a cutoff that equals the 75th percentile of all gene p-values

Supplemental Figure 1. Manhattan plots for the top hits for risk of BD with mtSNP rs3088309.
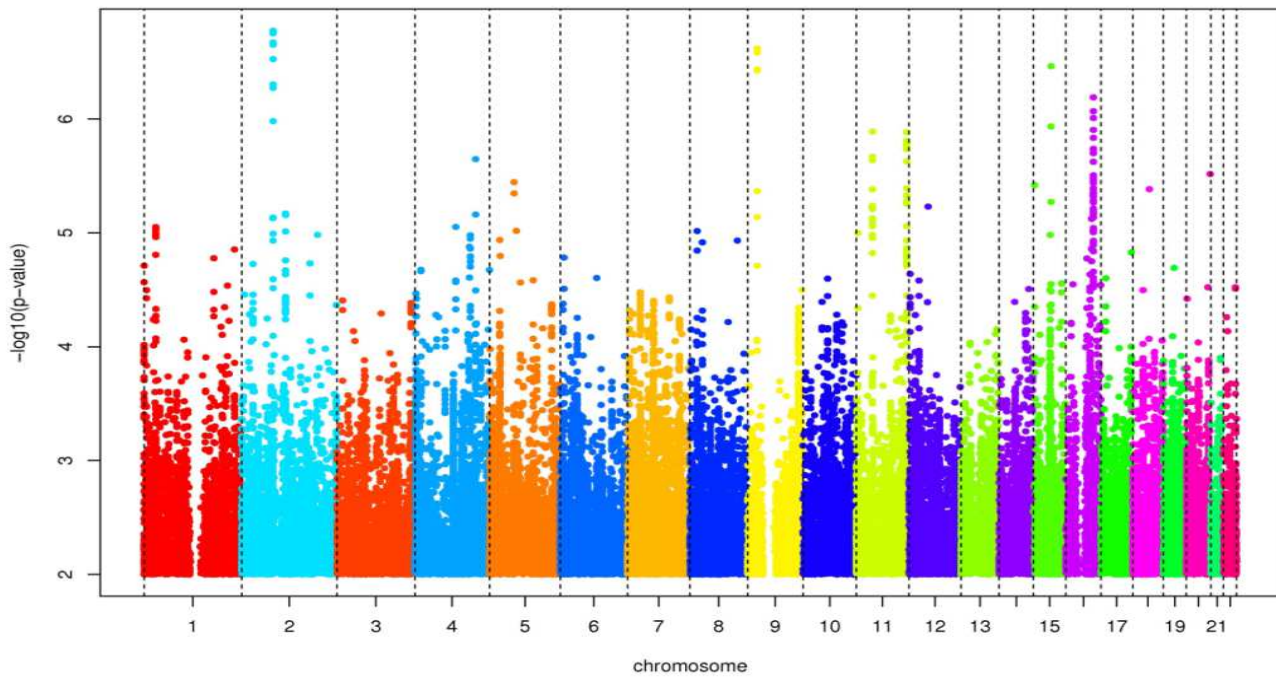
(A) 2-degree-of-freedom test
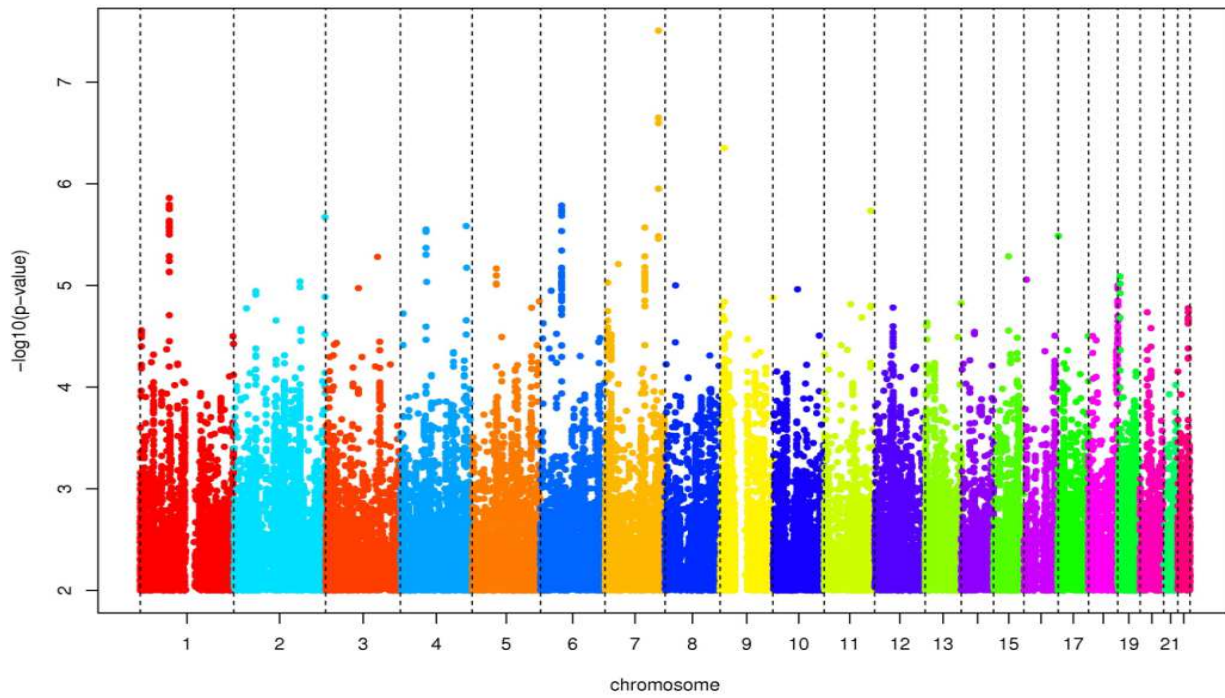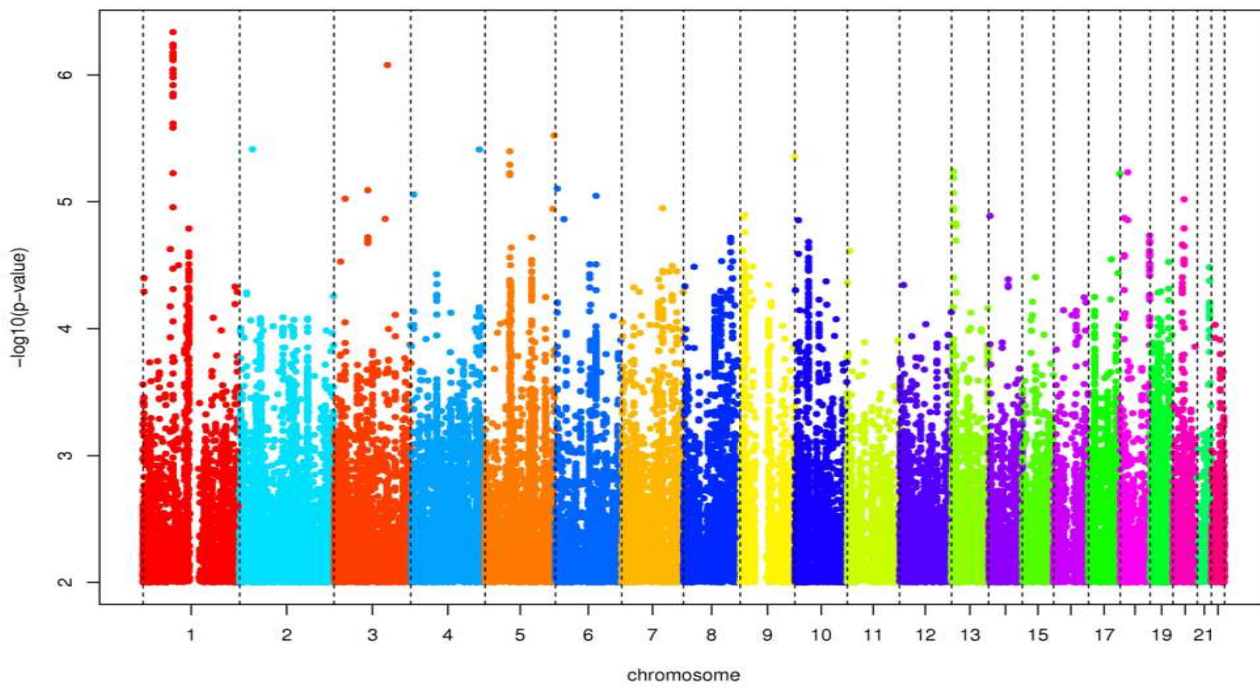
(B) Interaction test

Supplemental Figure 2. Manhattan plots for the top hits for risk of BD with mtSNP rs3088309.

(A) 2-degree-of-freedom test

(B) Interaction test