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Supplemental Data

Gene-centric Meta-analysis in 87,736 Individuals of European Ancestry Identifies Multiple Blood-Pressure-Related Loci

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Table S1: Clinical Characteristics of the IBC-array genotyped cohorts present in this study

Discovery Cohorts	Age	Female/Male	SBP	DBP	MAP	PP	BMI	Taking anti-hypertensive medication
AIBIII	52.8 ± 9.2	249/209	119.9 ± 13.7	75.4 ± 7.6	90.2 ± 8.8	44.5 ± 10.3	25.7 ± 3.6	0,0%
AMC-PAS	42.9 ± 5.3	180/563	128.6 ± 17.9	79.9 ± 10.7	96.1 ± 12.1	48.8 ± 13.1	26.9 ± 4.1	33,2%
Amish	47.6 ± 15.0	713/691	121.9 ± 16.5	75.3 ± 9.4	90.8 ± 10.8	46.6 ± 12.2	27.3 ± 5.0	16,4%
ARIC	54.2 ± 5.7	5124/4453	118.3 ± 17	71.5 ± 10	87.1 ± 11.3	46.7 ± 12.7	26.9 ± 4.9	25,1%
ASCOT	63 ± 8.1	224/1015	161.4 ± 17.8	92.9 ± 9.9	115.7 ± 10.6	68.5 ± 16.1	29.1 ± 4.6	89,2%
BHS	22.5 ± 4.4	291/228	111.5 ± 10.2	71.8 ± 8.5	85 ± 8.3	39.7 ± 8	24.7 ± 6.1	2,7%
BRIGHT (controls)	58.7 ± 8.9	1088/647	123 ± 10.5	76.4 ± 7.2	91.9 ± 7.5	46.7 ± 8.3	25.3 ± 3.3	0,0%
BRIGHT (cases)	58 ± 10.3	1144/775	154.3 ± 21.1	93.9 ± 11.3	114 ± 13.3	60.4 ± 15.7	58 ± 10.3	92,5%
BWHHS	68.85 ± 5.51	3373/0	146.53 ± 26.58	79.16 ± 12.85	102 ± 15	67.6 ± 19	27.25 ± 5.95	30,2%
CARDIA	40.6 ± 4.1	703/623	102.2 ± 30.5	71.9 ± 11.2	84.5 ± 11.4	37.7 ± 8.8	26.9 ± 6.4	3,7%
CCCS	64.2 ± 9.7	555/1402	136.94 ± 19.04	78.33 ± 10.61	156.48 ± 23.57	58.61 ± 15.69	29.2 ± 4.8/29.8 ± 6.5	88,7%
CFS	40.9 ± 19.9	302/252	121.1 ± 16.6	71.8 ± 11.7	88.2 ± 12.2	49.3 ± 12.4	30.1 ± 8.8	8,8%
CHS	72.6 ± 6.3	2208/1722	135.3 ± 21.5	69.9 ± 11.6	91.7 ± 12.9	65.4 ± 18.6	26.3 ± 4.8	39,7%
CLEAR	67.8 ± 9.6	0/1365	151.4 ± 22.4	82.2 ± 12.3	105.3 ± 13.8	69.2 ± 18.4	28.1 ± 5.0	67,0%
EHHS-BOSS-BDES	58.1 ± 8.8	1965/1552	131.7 ± 20.9	78.8 ± 11.5	96.5 ± 13.6	52.9 ± 14.7	30.2 ± 5.9	32,98%
EPIC_NL	54.06 ± 10.11	4057/1137	133.13 ± 21.22	80.46 ± 10.93	97.98 ± 13.20	52.65 ± 15.68	26.77 ± 4.45	N/A
FHS	40.9 ± 9.1	3775/3134	118.6 ± 14.3	76.4 ± 9.8	90.5 ± 10.6	42.2 ± 9.4	26.1 ± 5	5,5%
GIRaFH	44.5 ± 11.7	882/812	134.9 ± 19.2	82.0 ± 10.5	99.7 ± 12.3	52.9 ± 14.4	25.1 ± 3.5	9,3%
GRAPHIC	39.30 ± 14.50	1004/1020	127.09 ± 17.84	79.12 ± 10.96	95.1 ± 12.5	48 ± 11.9	26.11 ± 4.61	6,7%
GQ2	65.5 ± 10.5	385/93	130.51 ± 22.40	72.71 ± 12.89	149.78 ± 27.66	57.81 ± 18.47	29.7 ± 7.7/29.5 ± 6.3	76,2%
INVEST	69.4 ± 9.5	467/580	160.8 ± 17.4	90.6 ± 10.1	114.0 ± 10.6	70.1 ± 15.9	29.0 ± 4.7/28.4 ± 6.2	82,6%
LURIC	58.1 ± 8.6	558/1480	151.2 ± 24.4	89.8 ± 12.1	110.3 ± 15.0	61.4 ± 17.6	27.7 ± 4.2	85,6%
MDC	57.8 ± 5.9	1074/772	115.6 ± 5.8	73.6 ± 5.3	87.6 ± 4.7	42 ± 6	24.3 ± 3.3	100,0%
MEDAL	62.9 ± 9.0	1178/2820	136.8 ± 16.0	81.7 ± 9.6	94.9 ± 8.6	52.9 ± 11.5	30.5 ± 6.3	1,4%
MESA	62.7 ± 10.3	1199/1097	123.5 ± 20.8	70.1 ± 10.2	87.9 ± 12.3	53.4 ± 16.7	27.8 ± 5.1	33,3%
MONICA/KORA F3	57.6 ± 8.1	755/649	131.8 ± 19.4	83.3 ± 10.3	99.5 ± 12.6	48.5 ± 13.2	27.8 ± 4.5	30,1%
MONICA/KORA S12	51.8 ± 9.9	431/549	133.6 ± 19.1	81.5 ± 11.1	98.8 ± 12.5	52.1 ± 14.6	27.2 ± 4.0	16,6%
NBS	41.36 ± 12.37	1183/1169	N/A	N/A	N/A	N/A	N/A	N/A
NORDIL	56 ± 4	979/940	177.3 ± 14.6	105.9 ± 5.5	129.7 ± 7.1	71.5 ± 13.9	28.3 ± 4.6	0,0% a
NSHS95	49.4 ± 18.4	857/899	126.6 ± 17.7	76.7 ± 11.6	93.3 ± 11.8	49.9 ± 15.8	27.1 ± 5.5	N/A
PEAR	50.1 ± 9.4	194/244	151.8 ± 12.4	98.0 ± 5.7	115.9 ± 6.9	53.7 ± 10.8	[30.3 ± 4.4/30.4 ± 6.1]	0%
PennCAC	56.0 ± 8.0	631/1145	132 ± 23.2	72.4 ± 11.2	52.6 ± 12.6	59.5 ± 19.7	29.8 ± 5.9	N/A
PennCath	52.0 ± 9.0	739/1386	127 ± 15.1	76.7 ± 9.5	62.9 ± 10.5	51.9 ± 12.3	30.1 ± 5.9	32,8%
Procardis	59.34 ± 9.93	1634/1564	130.75 ± 17.11	79.63 ± 10.03	96.7 ± 11.2	51.1 ± 13.4	26.81 ± 4.37	19,3%
SMART	59.36 ± 12.25	206/299	158.64 ± 18.57	94.76 ± 11.80	116.06 ± 12.87	63.88 ± 13.78	27.35 ± 4.62	39,4%
WHI	68.0 ± 6.6	7606/0	133.0 ± 18.8	75.0 ± 9.7	94.3 ± 11.0	58.0 ± 16.2	28.3 ± 6.2	33,3%
WHII	60.83 ± 6.0	1845/3210	128.1 ± 16.7	74.6 ± 10.5	92.4 ± 11.8	53.5 ± 11.2	26.7 ± 4.3	22,8%
Total		49758/40496						

a No medication for two weeks prior to when BP was measured.

Replication Cohorts	Age	Female/Male	SBP	DBP	MAP	PP	BMI	Taking anti-hypertensive medication
GBPG cohorts (Nature Genetics 2009) b								
BLSA	42.4 ± 13.2	311/397	119.5 ± 15.0	77.3 ± 10.2	N/A	N/A	24.5 ± 3.6	5,2%
B5BC – T1DGC	44.3 ± 0.3	1315/1265	121.7 ± 15.3	79.4 ± 10.5	N/A	N/A	27.4 ± 4.9	4,7%
B5BC – WTCCC	44.9 ± 0.4	736/737	126.7 ± 15.2	79.1 ± 10.2	N/A	N/A	27.4 ± 4.7	4,2%
CoLaus	51.7 ± 9.5	2634/2335	127.3 ± 17.4	79.4 ± 10.8	N/A	N/A	25.8 ± 4.6	16,0%
EPIC- Norfolk - GWAS	57.2 ± 7.8	1134/966	136.7 ± 19.1	83.9 ± 11.9	N/A	N/A	26.3 ± 3.9	16,0%
Fenland	45.0 ± 7.3	785/616	122.8 ± 16.3	75.5 ± 10.7	N/A	N/A	27.1 ± 4.9	5,5%
InCHIANTI	56.9 ± 14.5	309/253	138.4 ± 20.1	81.4 ± 10.1	N/A	N/A	27.1 ± 4.2	23,7%
KORA	52.5 ± 10.1	838/806	133.4 ± 18.5	81.8 ± 10.9	N/A	N/A	27.3 ± 4.1	17,0%
NFBC1966	31 2476/2285	125.2 ± 13.8	77.5 ± 11.7	N/A	N/A	24.6 ± 4.2	2,0%	
Sardinia	40.8 ± 15.3	2279/1719	128.7 ± 28.4	79.7 ± 17.3	N/A	N/A	25.1 ± 4.6	10,0%
SHIP	45.0 ± 13.9	1754/1556	133.1 ± 20.2	83.5 ± 11.3	N/A	N/A	26.9 ± 4.7	16,3%
SUVIMAX	50.5 ± 6.2	1094/729	120.9 ± 12.3	78.0 ± 8.1	N/A	N/A	23.5 ± 3.3	0,0%
TwinsUK	45.8 ± 11.9	873/0	122.9 ± 15.4	78.2 ± 10.3	N/A	N/A	24.8 ± 4.6	22,0%
DGI controls	56.1 ± 8.7	651/626	133.3 ± 18.4	80.1 ± 10.0	N/A	N/A	26.7 ± 3.8	18,0%
FUSION NGT controls	58.2 ± 10.7	509/529	139.4 ± 19.3	81.5 ± 10.3	N/A	N/A	27.1 ± 4.0	21,0%
MIGen controls	48.9 ± 8.3	426/695	127.1 ± 17.8	80.2 ± 11.6	N/A	N/A	27.1 ± 5.2	13,4%
LIFELINES	47.3 ± 11.2	4640/3483	127.9 ± 15.7	75.1 ± 9.1	52.7 ± 11.8	92.7 ± 10.3	26.3 ± 4.3	15,5%
PREVEND	49.6 ± 12.5	1752/1869	129.1 ± 19.9	74.1 ± 9.9	54.9 ± 13.9	92.4 ± 12.5	26.1 ± 4.3	14,2%
WGHS	54.2 ± 7.1	22625/0	125.5 ± 16.4	78.0 ± 10.7	93.8 ± 11.9	47.6 ± 10.4	25.9 ± 5.0	12,9%
Total		47141/20866						

DBP = diastolic blood pressure

SBP = systolic blood pressure

MAP = median arterial pressure

PP = pulse pressure

BMI = body mass index

Mean±Standard deviation is given for each phenotype, except % where indicated.

MAP and PP demographics were not available for the GBPG cohorts.

Discovery cohorts : Allied Irish Bank Workers Study III (AIBIII); Academic Medical Center Amsterdam Premature Atherosclerosis Study (AMC-PAS); Atherosclerosis Risk In Communities (ARIC); Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT); Bogalusa Heart Study (BHS); British Genetics of Hypertension (BRIGHT); British Women's Heart and Health Study (BWHHS); Coronary Artery Risk Development in Young Adults (CARDIA); Cleveland Clinic CHARISMA Study (CCCS); Cleveland Family Study (CFS); Cardiovascular Health Study (CHS); Carotid Lesion Epidemiology And Risk (CLEAR); European Prospective Investigation into Cancer and Nutrition in the Netherlands (EPIC-NL); Framingham Heart Study (FHS); Genetic Identification of Risk factors in Familial Hypercholesterolemia (GIRaFH); Genetic Regulation of Arterial Pressure of Humans in the Community (GRAPHIC); Heredity and Phenotype Intervention (HAPI) in the Amish; International Verapamil SR Trandolapril Study (INVEST); Ludwigshafen Risk and Cardiovascular Health Study (LURIC); Malmo Diet and Cancer (MDC) Study; Multinational Etoricoxib and Diclofenac Arthritis Long-term (MEDAL) program; Multi-Ethnic Study of Atherosclerosis (MESA); MONICA Cooperative Health Research in the Region of Augsburg Study (KORA (F3 and S12 subst)); Nordic Diltiazem (NORDIL) Study; Pharmacogenomics Evaluation of Antihypertensive Responses (PEAR); University of Pennsylvania Coronary Artery Calcification Study (PennCAC); University of Pennsylvania Catheterization study program (PennCATH); Second Manifestations of ARTerial disease SMART); and Women's Health Initiative (WHI); Whitehall II study (WHII). *Members of the NHLBI Candidate gene Association Resource (CARE).

b The Global BPgen (GBPG) consortium comprises 17 GWAS studies: the Baltimore Longitudinal Study of Aging (BLSA), British 1958 Birth Cohort (B5BC-T1DGC and B5BC-WTCCC), Cohorte Lausannoise (CoLaus), Diabetes Genetics Initiative (DGI), European Prospective Investigation of Cancer-Norfolk-Gene Wide Association Study (EPIC-Norfolk-GWAS), Fenland Study, Finland-US States Investigation of NIDDM Genetics (FUSION), Cohorte de Invecchieare in Chianti (InCHIANTI), Kooperativer Gesundheitsforschung in der Region Augsburg (KORA), the Myocardial Infarction Genetics Consortium (MIGen), Northern Finland Birth Cohort of 1966 (NFBC1966), Sardinia, Study of Health in Pomerania (SHIP), Supplementation en Vitamines et Minéraux Antioxydants (SU.VI.MAX) and TwinsUK. The PROCARDIS data submitted to GBPG was excluded as this study contributed to the discovery analyses.

Table S2. P-values of previously reported significant SNPs (trait in which each SNP was associated marked with X)

Original publication	Locus	Nearest gene	Reported SNP	Proxy	CHR	Position	A1	A2	DBP	MAP	PP	SBP	HTN	A1 frequency	DBP,p-value	DBP proxy,p-value	MAP,p-value	MAP proxy,p-value	PP,p-value	PP proxy,p-value	SBP,p-value	SBP proxy,p-value			
[1]	MTHFR	MTHFR	rs4946049	na	1	11772952	T	G	X	X	X	X	X	0.151	3.75E-09	1.04E-08	7.74E-03	2.62E-07							
[2]	MTHFR-NPPB	MTHFR	rs17367504	na	1	11785365	G	A	X ^[4]	X ^[3|4]	X ^[3|4]	X ^[4]	0.055	5.74E-15	5.98E-16	2.32E-03	5.24E-12								
[3], [4]	MTHFR-NPPB	MTHFR	CLCN6	rs13306560	na	1	11788770	T	C	X	X	X	X	0.055	9.77E-06	7.60E-07	8.64E-03	5.03E-06							
[5]	NPPANPPB	NPPA	rs5068	na	1	11828561	G	A	X	X	X	X	X	0.051	4.81E-12	1.46E-13	2.49E-04	1.09E-11							
[6]	ST1L-CAPZ1	CAPZ1	rs17030613	rs3737136	1	112992330	C	A	X	X	X	X	X	0.209	9.57E-04	2.70E-03	0.81	0.03							
[7]	MOV10	MOV10	rs219888	na	1	11360740	G	A	X	X	X	X	X	0.032											
[8]	MDM4	MDM4	rs2198137	na	1	209764536	G	A	X	X	X	X	X	0.268	5.36E-07	4.88E-05	0.50	3.04E-03							
[2], [9]	AGT	AGT	rs204776	na	1	228915325	T	C	X	X	X	X	X	0.237	4.15E-10	9.53E-11	1.19E-03	7.37E-09							
[9]	AGT	CAPN9	rs11122587	rs204776	1	228933723	G	C	X	X	X	X	X	0.237	4.15E-10	9.53E-11	1.19E-03	7.37E-09							
[7]	FIGN-GRB14	FIGN	rs16349225	rs204776	2	164615066	C	T	X	X	X	X	X												
[10]	FIGN	FIGN	rs13002573	na	2	164623454	G	T	X	X	X	X	X												
[10]	FEN1	FEN1	rs1436468	na	2	164623723	T	T	X	X	X	X	X												
[11]	STK39	STK39	rs67177	na	3	160749501	G	T	X	X	X	X	X	0.268	0.63	0.33	0.42	0.28							
[8]	HRH1	HRH1	rs347591	na	3	11265122	G	T	X	X	X	X	X	0.343	7.01E-04	2.87E-06	1.38E-05	6.49E-08							
[4]	SLC4A7	SLC4A7	rs13082711	na	3	27512913	T	C	X	X	X	X	X												
[4]	ULK4	ULK4	rs3747372	na	3	41852418	C	T	X	X	X	X	X	0.167	0.02	0.44	4.17E-03	0.27							
[12]	ULK4	ULK4	rs815354	na	3	41857655	A	G	X	X	X	X	X	0.166	0.02	0.42	4.94E-03	0.30							
[10]	MATP	MATP	rs31010	na	3	47937450	G	A	X	X	X	X	X												
[4]	MECOM	MECOM	rs110976	na	3	17052830	T	C	X	X	X	X	X												
[10]	CHIC2	CHIC2	rs871606	na	4	54494002	T	C	X	X	X	X	X												
[4]	FGF5	FGF5	rs1458038	na	4	81383747	T	C	X	X	X	X	X												
[3]	FGF5	FGF5	rs16998073	na	4	81403365	T	A	X	X	X	X	X	0.293	0.03	0.02	0.31	0.03							
[4]	SLC30A8	SLC30A8	rs1510525	na	4	105007723	C	X	X	X	X	X	X												
[7]	ENPEP	ENPEP	rs6950591	na	4	111601101	C	A	X	X	X	X	X												
[4]	GUCY1A3-GUCY1B3	GUCY1A3	rs1313571	na	4	156846365	C	A	X	X	X	X	X												
[13]	SUB1-NPR3	SUB1-NPR3	rs7726475	na	5	3211671	A	G	X	X	X	X	X												
[2]	NPR3	NPR3	rs1421811	na	5	3275027	G	C	X	X	X	X	X												
[7]	NPR3-C5orf23	C5orf23	rs1173766	rs1173743	5	32840285	C	T	X	X	X	X	X	0.448	4.50E-06	7.44E-08	6.91E-05	1.22E-07							
[4]	C5orf23	C5orf23	rs1173743	na	5	32840285	T	C	X	X	X	X	X	0.443	2.14E-03	1.53E-04	7.87E-03	1.24E-04							
[4]	EBP	EFP	rs1105330	na	5	15777785	T	G	X	X	X	X	X												
[2], [4]	HFE	HFE	rs1799945	na	6	26199158	G	C	X ^[2]	X ^[4]	X ^[4]	X ^[4]	X ^[4]	0.145	2.55E-11	5.80E-09	0.59	7.04E-05							
[4]	BAT2-BAT5	BAT2	rs805303	rs805303	6	31724345	A	G	X	X	X	X	X	0.366	1.95E-05	1.42E-04	0.46	3.44E-03							
[4]	BAT2-BAT5	BAT5	rs805303	rs7029	6	31724345	A	G	X	X	X	X	X	0.366	0.13	3.47E-03	2.28E-03								
[10]	PK3C1G	PK3C1G	rs17477177	na	7	10519904	T	C	X	X	X	X	X												
[2]	NOV	NOV	rs179920	na	7	10519904	T	C	X	X	X	X	X												
[14]	BLK-GATA4	BLK-GATA4	rs6099466	na	8	11471318	C	T	X	X	X	X	X	0.42	1.63E-04	1.14E-05	2.66E-03	1.38E-05							
[14]	BLK-GATA4	BLK-GATA4	rs2898290	na	8	11471318	C	T	X	X	X	X	X	0.42	1.10E-04	8.66E-05	0.03	1.17E-04							
[10]	NOV	NOV	rs2017518	na	8	120504993	T	C	X	X	X	X	X												
[4]	CACNB2(5')	CACNB2(5')	rs4373814	na	10	1845978	G	C	X	X	X	X	X												
[4]	CACNB2(3')	CACNB2(3')	rs111332	na	10	16747454	G	C	X	X	X	X	X												
[4]	Q6D2	CACNB2	rs111332	na	10	16747454	T	C	X	X	X	X	X	0.52	0.78	0.48	0.31	0.38							
[4]	C10orf107	C10orf107	rs4590817	na	10	63137559	G	A	X	X	X	X	X												
[3]	C10orf107	C10orf107	rs1503040	na	10	63194597	T	C	X	X	X	X	X	0.187	0.91	0.44	0.14	0.19							
[4]	PLCE1	PLCE1	rs932764	na	10	65985930	G	A	X	X	X	X	X												
[12]	CYP17A1	CYP17A1	rs1004467	rs3824755	10	104584497	G	A	X	X	X	X	X	0.099	2.48E-04	1.82E-07	3.39E-09	4.58E-10							
[3], [4]	CYP17A1-NT5C2	NT5C2	rs1191548	rs1191548	10	104584497	T	C	X ^[2]	X ^[4]	X ^[4]	X ^[4]	X ^[4]	0.083	0.10	0.01	8.53E-03	3.80E-03							
[10]	ADRB1	ADRB1	rs1801263	na	10	15795346	G	C	X	X	X	X	X	0.204											
[2]	LSP1/TNNT3	LSP1/TNNT3	rs6611348	na	11	1861868	T	C	X	X	X	X	X	0.278	3.62E-06	4.03E-08	4.19E-03	7.05E-07							
[4]	ADM	ADM	rs7129220	na	11	10397114	G	A	X	X	X	X	X												
[2]	SOX6	SOX6	rs2014408	na	11	16321858	T	C	X	X	X	X	X												
[4], [12]	PLCE1	PLCE1	rs381815	na	11	16588644	C	A	X ^[2]	X ^[4]	X ^[4]	X ^[4]	X ^[4]	0.115E-09	9.11E-08	5.91E-10	5.97E-05	3.82E-10							
[2]	NR2B2-KO NJ11/ABC68	NR2B2-KO NJ11/ABC68	rs2013011	na	11	17008749	G	A	X	X	X	X	X	0.37	0.01	8.86E-08	3.57E-05								
[4]	FLJ32810-TMEM133	TMEM133	rs631365	na	11	10008748	G	C	X	X	X	X	X												
[10]	ADAMTS8	ADAMTS8	rs11222084	na	11	12978440	T	C	X	X	X	X	X												
[15]	WNK1	WNK1	rs765250	rs7980163	12	778544	C	T	X	X	X	X	X	0.318	0.92	0.26	1.57E-03	0.02	0.82	0.55					
[15]	WNK1	WNK1	rs765250	rs10849559	12	2306783	C	X	X	X	X	X	X	0.318	0.20	0.30	0.82	0.55							
[2]	C9orf11C	C9orf11C	rs1919526	na	12	88852720	C	T	X	X	X	X	X												
[2]	ATP2B1	ATP2B1	rs291105354	na	12	88853220	C	T	X	X	X	X	X	0.172	2.02E-05	1.15E-09	5.95E-09	8.31E-14	1.67E-05	2.65E-08	2.67E-14				
[2]	ATP2B1	ATP2B1	rs1105354	na	12	88855064	G	A	X	X	X	X	X	0.178	2.66E-05	1.15E-09	8.72E-08	8.31E-14	1.87E-05	2.65E-08	2.67E-14				
[2]	ATP2B1	ATP2B1	rs17249754	rs1105354	12	88854717	A	G	X ^[2]	X ^[4]	X ^[4]	X ^[4]	X ^[4]	0.171	1.97E-05	1.15E-09	7.30E-08	8.31E-14	2.30E-05	2.65E-08	6.10E-08	2.67E-14			
[4], [12]	SH2B3	SH2B3	rs3184504	na	12	10368991	T	C	X	X	X	X	X	0.494	5.39E-11	6.82E-11	0.03	2.11E-08							
[7]	SH2B3	SH2B3	ATXN2	rs6531739	na	12	10492139	C	T	X	X	X	X	X	0.499	2.13E-10	5.39E-11	5.55E-10	6.82E-11	0.06	0.03	1.22E-07	2.11E-08		
[7]	TBX3	TBX3	rs354441	na	12	114036820	G	A	X	X	X	X	X												
[3], [4]	CYP1A1-CSK	CSK	rs1378942	rs2472304	15	72864420	C	A	X ^[3|4]	X ^[3|4]	X ^[3|4]	X ^[3|4]	X ^[4]	0.326	6.67E-09	2.20E-10	1.74E-09	1.49E-10	0.03</td						

Table S3. Signals below 1E-04 in the discovery meta-analysis

Nearest gene	SNP	CHR	Position	A1	A2	DBP			MAP			PP			SBP				
						A1Freq	Beta	SE	P-val	Beta	SE	P-val	Beta	SE	P-val	Beta	SE	P-val	
MTHFR	rs397514	1	1106655 C	G	A	0.01	-0.0464	0.0841	4.109E-09	-0.538	0.0653	1.635E-08	-0.5987	0.1357	0.000010203	-0.4499	0.0874	2.6219E-07	
MTHFR	rs4849649	1	11772852 T	G	C	0.06	-0.295	0.185	3.833E-09	-0.507	0.0613	1.035E-08	-0.6176	0.1357	5.3471E-06	-0.4499	0.0874	2.6219E-07	
MTHFR	rs3818762	1	11773502 C	G	T	0.29	-0.2597	0.0564	2.833E-09	-0.2711	0.0637	0.000010101	-0.6176	0.1357	5.3471E-06	-0.4499	0.0874	2.6219E-07	
MTHFR	rs13065565	1	11774697 T	C	A	0.10	-0.5002	0.0841	2.834E-09	-0.5496	0.0593	7.9437E-09	-0.6176	0.1357	5.3471E-06	-0.4499	0.0874	2.6219E-07	
MTHFR	rs1746413	1	11774887 T	C	A	0.27	-0.2403	0.0569	0.000023844	-0.3413	0.0628	5.484E-08	-1.4459	0.2968	1.1102E-06	-0.453	0.0896	4.2221E-07	
MTHFR	rs1801131	1	11777068 G	T	C	0.315	-0.3063	0.0553	2.926E-08	-0.3413	0.0628	5.484E-08	-0.3988	0.0946	0.000025606	-0.3988	0.0946	0.000025606	
MTHFR	rs12121543	1	11777258 A	C	T	0.246	-0.2891	0.0585	7.753E-07	-0.3168	0.0663	1.8201E-06	-0.6176	0.1357	5.3471E-06	-0.4499	0.0874	2.6219E-07	
MTHFR	rs194798	1	11777342 G	A	T	0.413	-0.2264	0.0516	0.000011258	-0.1642	0.000011258	-0.1642	-0.6359	0.1611	0.000076759	-0.6359	0.1611	0.000076759	
MTHFR	rs4849052	1	11780534 T	C	A	0.41	-0.2264	0.0516	1.6492E-06	-0.2521	0.059	0.000010162	-0.6359	0.1611	0.000076759	-0.6359	0.1611	0.000076759	
MTHFR	rs3909563	1	11780534 G	A	T	0.10	-0.0831	0.0665	9.248E-06	-0.5205	0.1122	2.393E-06	-0.6359	0.1611	0.000076759	-0.6359	0.1611	0.000076759	
MTHFR	rs13066567	1	11780532 G	C	T	0.057	-0.0941	0.0643	0.000010162	-0.1844	0.000010162	-0.1844	-0.6359	0.1611	0.000076759	-0.6359	0.1611	0.000076759	
MTHFR	rs17037390	1	11783430 A	G	T	0.157	-0.5343	0.07	2.236E-14	-0.6202	0.0793	5.409E-15	-0.7391	0.113	6.1827E-11	-0.5581	0.1372	0.000047199	
MTHFR	rs17037396	1	11784634 T	C	A	0.101	-0.478	0.0782	2.303E-08	-0.5181	0.0564	7.6372E-08	-0.7849	0.1138	5.2374E-12	-0.6791	0.1371	7.2437E-07	
MTHFR	rs17367504	1	11785365 G	A	T	0.154	-0.5499	0.0704	5.7447E-15	-0.6461	0.0799	5.8792E-16	-0.7391	0.113	6.1827E-11	-0.5581	0.1372	0.000047199	
MTHFR	rs2066470	1	11785644 A	G	T	0.098	-0.2550	0.0849	5.8741E-10	-0.5862	0.0762	9.2098E-10	-0.7849	0.1138	5.2374E-12	-0.6791	0.1371	7.2437E-07	
MTHFR	rs7553194	1	11786732 A	G	T	0.099	-0.5416	0.1281	0.000023658	-0.1615	0.1439	0.000018829	-0.6359	0.1611	0.000076759	-0.6359	0.1611	0.000076759	
MTHFR	rs37533852	1	11788129 C	A	T	0.099	-0.6606	0.1465	6.4852E-06	-0.7068	0.1642	0.000010162	-0.6359	0.1611	0.000076759	-0.6359	0.1611	0.000076759	
MTHFR	rs13066561	1	11788391 G	A	T	0.156	-0.5566	0.0704	1.9728E-15	-0.6538	0.0795	2.0282E-16	-0.7391	0.113	2.5619E-12	-0.5581	0.1372	0.000047199	
CLCN6	rs17037425	1	11792570 A	G	T	0.14	-0.5662	0.0734	1.2160E-14	-0.6551	0.0652	3.355E-18	-0.7849	0.1138	3.355E-18	-0.6791	0.1371	7.2437E-07	
NPPA	rs198358	1	11826683 C	T	A	0.24	-0.3125	0.097	1.6309E-07	-0.3304	0.0677	1.0752E-06	-0.3445	0.088	0.000090553	-0.3445	0.088	0.000090553	
NPPA	rs5068	1	11828561 G	A	T	0.052	-0.7793	0.1128	4.8135E-12	-0.9429	0.1276	1.453E-13	-0.3822	0.0838	5.0764E-06	-0.3612	0.0826	0.000012271	
NPPB	rs198375	1	11836344 C	T	A	0.396	-0.2762	0.0518	0.9582E-08	-0.2877	0.0587	9.6047E-07	-0.3445	0.088	0.000090553	-0.3445	0.088	0.000090553	
NPPB	rs198388	1	11839927 T	C	A	0.432	-0.2701	0.051	1.2062E-07	-0.2821	0.0579	1.1068E-06	-0.3445	0.088	0.000090553	-0.3445	0.088	0.000090553	
NPPB	rs6668659	1	11844886 G	T	A	0.346	-0.3308	0.0532	5.0763E-10	-0.3661	0.0603	1.1908E-09	-0.3445	0.088	0.000090553	-0.3445	0.088	0.000090553	
NPPB	rs1318408	1	11848363 G	A	T	0.115	-0.3482	0.0795	0.00001977	-0.3875	0.0902	0.000017387	-0.3445	0.088	0.000090553	-0.3445	0.088	0.000090553	
NPPB	rs12562952	1	11849643 C	T	A	0.107	-0.3719	0.0823	6.1508E-06	-0.4177	0.0932	7.4797E-06	-0.2298	0.055	0.000099078	-0.3445	0.088	0.000099078	
ADORA3	rs17037411	1	11851171 C	T	A	0.14	-0.0831	0.0643	0.000010162	-0.1642	0.000010162	-0.1642	-0.3772	0.0947	0.000066006	-0.3772	0.0947	0.000066006	
WTN2	rs13634	1	11854658 A	T	C	0.253	-0.2516	0.0584	0.000016736	-0.2828	0.0663	0.000020424	-0.2818	0.0683	0.000037239	-0.2818	0.0683	0.000037239	
C1orf1189	rs4072431	1	11854740 A	G	T	0.453	-0.1991	0.0509	0.000013109	-0.2828	0.0663	0.000020424	-0.2818	0.0683	0.000037239	-0.2818	0.0683	0.000037239	
PIK3C2B	rs10494852	1	20274409 C	T	G	0.306	-0.2437	0.0563	0.000015068	-0.2841	0.0698	0.000046901	-0.4165	0.0848	8.3407E-07	-0.4165	0.0848	8.3407E-07	
MDM4	rs2169137	1	202764536 G	C	T	0.268	-0.3089	0.0616	5.359E-07	-0.2841	0.0698	0.000046901	-0.3845	0.0842	4.9386E-06	-0.3845	0.0842	4.9386E-06	
MDM4	rs2452717	1	202778723 T	C	A	0.31	-0.2608	0.0549	1.9999E-06	-0.2841	0.0698	0.000046901	-0.3845	0.0842	4.9386E-06	-0.3845	0.0842	4.9386E-06	
AGT	rs943580	1	228903667 G	A	T	0.41	-0.2677	0.0524	3.2921E-07	0.3198	0.0594	7.5448E-08	0.4165	0.0844	7.8951E-07	0.4165	0.0844	7.8951E-07	
AGT	rs3789670	1	228910337 T	A	G	0.109	-0.4003	0.0891	5.9464E-07	-0.4989	0.0916	6.2151E-06	0.3445	0.088	0.000090553	0.3445	0.088	0.000090553	
AGT	rs475543	1	22891150 T	C	A	0.16	-0.2633	0.0525	0.000010162	-0.3032	0.0916	3.1547E-07	0.3445	0.088	0.000090553	0.3445	0.088	0.000090553	
AGT	rs6567360	1	228911615 T	C	A	0.365	-0.2634	0.0525	2.3117E-08	-0.3033	0.0916	1.4644E-08	0.3445	0.088	8.3407E-07	0.3445	0.088	8.3407E-07	
AGT	rs6999	1	228912417 G	A	T	0.414	-0.2757	0.0523	1.2694E-07	-0.3123	0.093	1.3038E-07	0.3845	0.0842	4.9386E-06	0.3845	0.0842	4.9386E-06	
AGT	rs2004776	1	228915325 T	C	A	0.239	-0.3694	0.0591	4.1494E-10	-0.4333	0.0671	9.5316E-11	0.4165	0.0844	7.3648E-09	0.4165	0.0844	7.3648E-09	
AGT	rs2071404	1	22891563 A	T	C	0.111	-0.3977	0.0808	1.2353E-06	-0.4721E-07	0.4911	0.0509	6.4659E-08	0.6153	0.1298	2.1344E-06	0.6153	0.1298	2.1344E-06
AGT	rs2071405	1	22891563 A	T	C	0.111	-0.3977	0.0808	1.2353E-06	-0.4721E-07	0.4911	0.0509	6.4659E-08	0.6262	0.1296	1.2093E-06	0.6262	0.1296	1.2093E-06
ZEB2	rs2044369	2	146641529 G	A	T	0.241	-0.0831	0.0513	0.000015188	-0.2824	0.0603	2.8708E-06	-0.2654	0.061	0.000013761	-0.4246	0.1077	0.000076199	
PDE1A	rs2623431	2	18292232 C	T	A	0.306	-0.2387	0.0551	0.000014989	-0.2824	0.0603	2.8708E-06	-0.2654	0.061	0.000013761	-0.4246	0.1077	0.000076199	
PDE1A	rs11682598	2	182927952 G	C	T	0.304	-0.2496	0.0553	6.2586E-06	-0.2824	0.0603	2.8708E-06	-0.2654	0.061	0.000013761	-0.4246	0.1077	0.000076199	
PDE1A	rs16823124	2	182932372 A	G	T	0.304	-0.2677	0.0556	1.7583E-06	-0.2824	0.0607	0.000036957	-0.4246	0.1077	0.000076199	-0.4246	0.1077	0.000076199	
PDE1A	rs1430158	2	182970373 T	C	A	0.326	-0.2309	0.0541	0.000010162	-0.2828	0.0607	0.000036957	-0.4246	0.1077	0.000076199	-0.4246	0.1077	0.000076199	
PDE1A	rs226714	2	182974510 A	G	T	0.477	-0.2322	0.0509	0.000016237	-0.2272	0.0577	0.000012331	-0.3746	0.0894	0.000075044	-0.3746	0.0894	0.000075044	
TRIM38	rs3762688	2	182975410 G	T	C	0.385	-0.2357	0.0502	5.8736E-06	-0.3104	0.059	1.4646E-07	0.3746	0.0894	0.000075044	0.3746	0.0894	0.000075044	
HFE	rs2794719	2	18296889 G	T	C	0.407	-0.2211	0.0517	0.000018814	-0.4475	0.1111	0.00006023	-0.4017	0.0914	0.000016088	-0.4017	0.0914	0.000016088	
HFE	rs1799495	2	182969158 G	T	C	0.146	-0.4797	0.0719	2.5497E-11	-0.474									

VCL	r54746172	10	75525948	C	T	0.254	0.2479	0.0583	0.000021352	0.2954	0.0661	7.9079E-06		0.3905	0.0942	0.000033932					
VCL	r53793921	10	75538120	C	T	0.281	0.2316	0.0577	0.000059716	0.2807	0.0654	0.000017886		0.3723	0.0832	0.000065006					
VCL	r510824071	10	75543245	C	T	0.417								0.3321	0.0844	0.000063946					
NRG3	r51194902	10	84281365	G	A	0															
CYP17A1	r53824755	10	104585939	C	G	0.095				-0.5122	0.0982	1.8221E-07	15.5401	3.8903	0.000064609	-0.8709	0.1397	4.5724E-10			
SORCS1	r59630080	10	108669078	T	C	0.04				0.5872	0.147	0.000054464									
ADRB1	r5076938	10	115779365	C	T	0.279	-0.2614	0.0565	0.000003765	-0.3575	0.0641	2.4161E-08		-0.4673	0.0915	3.2195E-07					
ADRB1	r52429511	10	115791243	C	T	0.476	0.2267	0.0506	7.6279E-06	0.275	0.0574	1.6992E-06		0.346	0.082	0.000024187					
ADRB1	r51801253	10	115795040	G	C	0.275	-0.2625	0.0567	3.6229E-06	-0.3526	0.0642	4.0265E-08		-0.4549	0.0917	7.057E-07					
ADRB1	r53816720	10	115795165	C	T	0.372				0.2745	0.0595	0.000007551		-0.358	0.0845	0.000024432					
ADRB1	r57791716	10	115801394	T	C	0.468	0.2186	0.0506	0.00001539	0.2719	0.0573	2.1044E-06		0.340	0.0847	0.000019901					
ADRB1	r50885531	10	115802482	T	C	0.469	0.2219	0.0506	0.000014747	0.2975	0.0584	0.00002689	0.2788	0.0651	0.000018471	0.4586	0.0907	4.2636E-07			
LSP1	r54980379	11	1845190	T	C	0.376				0.2975	0.0584	0.00002689		-0.4227	0.0854	7.5326E-07					
LSP1	r5592373	11	1847566	G	A	0.361	-0.2604	0.0529	8.3762E-07	-0.3137	0.0599	1.663E-07		0.5848	0.0827	1.4837E-12					
LSP1	r5661348	11	1861868	C	T	0.436	0.265	0.0511	2.1442E-07	0.3728	0.0558	1.2859E-10	0.3445	0.0587	4.2721E-09	0.3439	0.0817	0.000025842			
TNTT3	r5909116	11	1898522	C	T	0.48							0.23	0.0581	0.000074466	0.3419	0.0836	0.000042056			
MRLP23	r57395920	11	1920888	T	C	0.406															
H19	r5217727	11	1973484	A	G	0.191	0.2575	0.0643	0.000002126	0.3145	0.0729	0.000016271		0.465	0.1041	7.8806E-06					
H19	r54930098	11	1977531	G	C	0.493				0.3074	0.0674	0.000005201		0.3292	0.0818	0.000059104					
SOX6	r52014062	11	1925947	T	C	0.202	0.3406	0.0627	5.6784E-08	0.4357	0.0712	4.9121E-10		0.3075	0.1035	2.6975E-06					
SOX6	r52017367	11	1965585	T	C	0.372				0.2401	0.0589	0.000058952		0.3746	0.0895	0.000018464					
SOX6	r52014408	11	17321858	T	C	0.21	0.3306	0.0619	9.1146E-08	0.4347	0.0702	5.9081E-10	0.2859	0.0712	0.000059707	-0.2836	0.0852	0.000006745			
P1K3CA2	r56740610	11	17132633	A	G	0.474															
NUCB2	r5214070	11	17261893	A	T	0.288															
NUCB2	r5207081	11	17308259	G	C	0.338															
KCNJ11	r55215	11	17365203	C	T	0.369															
KCNJ11	r5896258	11	17367739	G	A	0.378															
ACBCC8	r52013855	11	17368146	A	G	0.33															
ACBCC8	r5757110	11	17368563	C	A	0.371															
ABCBC8	r52074311	11	17378436	A	G	0.434															
CDC42BPG	r5257154	11	16434163	C	T	0.251															
SIP1	r53741378	11	165165513	T	C	0.131				-0.3546	0.0851	0.000003076									
RELA	r511227247	11	165179429	C	A	0.127				-0.3449	0.0864	0.000006970	-0.3528	0.0874	0.000054629	-0.5797	0.1211	1.7015E-06			
RELA	r52306365	11	165183922	A	G	0.126				-0.3467	0.0867	0.000003939	-0.3546	0.0877	0.000052617	-0.5848	0.1234	1.9992E-06			
RELA	r57101916	11	165187939	T	C	0.126				-0.3444	0.0867	0.000007181	-0.3566	0.0877	0.000048939	-0.5832	0.1234	2.1573E-06			
NOX4	r512793930	11	16851580	C	A	0.317															
VINX1	r512794001	11	16851842	T	C	0.071															
TNFRSF1A	r5449670	12	1691898	C	G	0.463	-0.2457	0.0546	6.6711E-06	-0.2493	0.0617	0.000002421									
ITPR2	r51496624	12	26701494	T	C	0.188								0.3014	0.0741	0.000047886					
HOXC4	r52739416	12	52723537	C	A	0.295	-0.2339	0.056	0.00002989	-0.2895	0.0634	4.9307E-06		-0.4262	0.0901	0.000002259					
ATPB21	r51401982	12	88513730	G	A	0.405	-0.3149	0.0515	9.6668E-12	-0.4015	0.0583	5.8879E-12		-0.5639	0.0832	1.2311E-11					
ATPB21	r52681472	12	88533098	G	A	0.172	-0.2498	0.1007	0.000020196	-0.612	0.1129	5.8732E-08	-0.5087	0.1182	0.000016718	-0.9733	0.1654	3.9879E-09			
ATPB21	r52681492	12	88537220	C	T	0.178	-0.2461	0.1014	7.00002683	-0.603	0.1136	8.722E-08	-0.5099	0.1191	0.000018697	-0.9707	0.1666	5.6782E-09			
ATPB21	r51105354	12	88550654	G	A	0.166	-0.4147	0.0681	1.1499E-09	-0.577	0.0773	8.3183E-14	-0.4358	0.0783	2.6503E-08	-0.8392	0.1102	2.6702E-14			
ATPB21	r51105358	12	88552673	C	G	0.415	-0.2717	0.0699	8.1331E-06	-0.5069	0.0763	4.3522E-08	-0.5506	0.0704	4.1154E-08	-0.7477	0.0817	8.1182E-06			
ATPB21	r51234675	12	88564717	G	A	0.173	-0.2315	0.1011	0.000005248	-0.2778	0.0703	1.2414E-06	-0.5022	0.1186	0.000002299	-0.9685	0.166	8.1707E-06			
ATPB21	r51736250	12	88605319	T	C	0.415	-0.2632	0.0513	8.2393E-07	-0.3432	0.0581	3.5514E-09		-0.4984	0.0829	3.5439E-09					
SH2B3	r510849947	12	110349067	C	T	0.201	-0.4299	0.1107	8.5042E-06	-0.499	0.1248	0.000003361		0.5009	0.0894	2.1105E-08					
SH2B3	r53184504	12	11036891	C	T	0.488	-0.3642	0.0555	5.3855E-11	0.4094	0.0627	6.8171E-11									
SH2B3	r5739496	12	110372042	G	A	0.203	-0.4893	0.108	5.8703E-06	0.4983	0.1216	0.0000041772									
ATXN2	r510849949	12	11037924	G	A	0.2	-0.4957	0.1091	5.5763E-06	-0.5027	0.1229	0.0000043269		-0.3659	0.0889	0.000038683					
ATXN2	r52073950	12	110378455	T	C	0.199	-0.5036	0.1096	0.000004035	-0.5046	0.1234	0.0000043208									
ATXN2	r51201621	12	110379553	C	G	0.505	-0.4755	0.0899	1.1028E-10	0.5343	0.0857	4.6105E-10	0.6614	0.1261	1.5591E-07						
ATXN2	r5108612	12	110423650	T	C	0.185	-0.4665	0.1104	0.000001504												
ATXN2	r5616513	12	110497766	T	G	0.184	-0.4575	0.1099	0.000001504												
ATXN2	r5653178	12	110492193	C	T	0.499	-0.4867	0.0766	2.1310E-10	0.5335	0.0886	5.5509E-10	0.6695	0.1266	1.2227E-07						
ATXN2	r5653179	12	110504182	G	T	0.184	-0.4634	0.1098	0.000002456												
BRAP	r5601663	12	110607667	G	A	0.269	-0.433	0.0897	0.000001392	-0.4406	0.1008	0.0000012392		-0.4278	0.0968	9.9197E-06					
ALDH2	r51466777	12	110714419	A	G	0.167	-0.3174	0.0769	2.8738E-06	-0.3177	0.0777	0.000003703		-0.4178	0.0971	0.0000016823					
ALDH2	r51714777	12	110717401	C	T	0.325	-0.2818	0.0553	3.3994E-07	-0.3114	0.0626	6.6565E-07		-0.4237	0.0928	2.3814E-06					
CSK	r5278940	12	110720547	C	A	0.411	-0.2744	0.0592	6.6717E-09	0.5547	0.0873	7.352E-09		-0.4261	0.0971	9.2368E-07					
CSK	r5278940	12	110720547	A	G	0.326	-0.4819	0.0819	3.6388E-09	0.5596	0.0818	1.1039E-09		-0.4298	0.0954	5.8659E-06					
CSK	r5278940	12	110720547	G	T	0.279	-0.4373	0.0563	6.8169E-10	0.4156	0.0638	7.5311E-11	-0.2673	0.0648	0.0000037388	-0.6058	0.0911	2.9854E-11			
LMAN1L	r57162232	12	11092949	G	A	0.273	-0.4533	0.0942	1.4503E-06	0.5584	0.0835	2.6277E-09		0.517	0.0906	1.1765E-08					
LMAN1L	r511634474	12	11092327	C	G	0.273	-0.4441	0.0944	2.5199E-06	0.5534	0										

Table S4. eQTL supporting information on BP associated SNPs

Locus	IndexSNP	eSNP	r^2 (index to eSNP)	Tissue	Reference	eSNP.p	Chr	Pos (B36)	ArrayID	Transcript	isCis?	Best eSNP/transcript	Best eSNP.p	Tissue	? Best to BPeSNP	D'
2	rs2854275	rs2187668	1	Monocytes		4.82E-95	6	32713862		HLA-DRB4	Y	rs2187668	4.82E-95	Monocytes	Same	Same
2	rs2854275	rs2187668	1	Blood	Fehrman et al 20	3.20E-59	6	32713862	780403	HLA-DRB1	Y	rs2187668	3.20E-59	Blood(Fehrman et al)	Same	Same
2	rs2854275	rs2187668	1	Liver	Schröder et al 201	1.31E-10	6	32713862		HLA-DRB4	Y	rs2187668	1.31E-10	Liver(Schröder)	Same	Same
3	rs2282978	rs2282978	IndexSNP	CR:Norm		0.00002616	7	92102346	10023821866	CDK6	Y	Index SNP	0.00002616	CR:Norm	Index SNP	Index SNP
4	rs4746172	rs10824069	1	Lung		<2E-16	10	75532802	100300544_TGI_at	ADK	Y	rs10824069	<2E-16	Lung	Same	Same
5	rs217727	rs217727	IndexSNP	LCL (MuTHER)	Grundberg et al 20	2.40E-06	11	1973484	ILMN_1830423	AK126915	Y	Index SNP	2.40E-06	LCL (MuTHER)	Same	Same
5	rs217727	rs217727	IndexSNP	Skin (MuTHER)	Grundberg et al 20	6.59E-06	11	1973484	ILMN_1830423	AK126915	Y	Index SNP	6.59E-06	Skin (MuTHER)	Same	Same
6	rs757081	rs757081	IndexSNP	LCL in asthmatics (Liang 1kg)	Liang et 2013	1.56E-16	11	17308259	229838_at	NUCB2	Y	rs214083	3.28E-45	LCL in asthmatics (Liang 1kg)	0.415	1
6	rs757081	rs757081	IndexSNP	LCL (MuTHER)	Grundberg et al 20	3.10E-05	11	17308259	ILMN_1799381	SNORD14A	Y	rs1541533	6.17E-44	LCL (MuTHER)	0.034	1
7	rs3741378	rs2306365	0.898	Lymph		2.54E-15	11	65183922	hmm1261-S	PCNLX3	Y	rs2306365	2.54E-15	Lymph	Same	Same
7	rs3741378	rs11227247	0.92	VC:All		7.60E-11	11	65179429	10023850638	MALAT1	Y	rs11227247	7.60E-11	VC:All	Same	Same
7	rs3741378	rs11227247	0.92	Omental Adipose	Dobrin et al 2011	2.16E-08	11	65179429	10023850638	MALAT1	Y	rs11227247	2.16E-08	omental	Same	Same
7	rs3741378	rs7101916	0.879	SubCutAdipose(Greenawalt)	Greenawalt et al 2012	4.70E-07	11	65187936	10023850638	MALAT1	Y	rs7101916	4.70E-07	SubCutAdipose(Greenawalt)	Same	Same
7	rs3741378	rs7101916	0.879	CR:All		7.47E-06	11	65187936	10023850638	MALAT1	Y	rs7101916	7.47E-06	CR:All	Same	Same
7	rs3741378	rs11227247	0.92	Liver(UChicago)		0.005228942	11	65179429	A_23_P161624	FOSL1	Y	rs11227247	0.005228942	Liver(UChicago)	Same	Same
7	rs3741378	rs11227247	0.92	Lymph		1.61E-14	11	65179429	hmm1261-S	PCNLX3	Y	rs2306365	2.54E-15	Lymph	0.915	1
9	rs33063	rs33063	IndexSNP	BcellsTransformed_HapMapJPT		9.55E-08	16	68197718	GI_40217627-S	LOC283970	Y	rs9939092	4.74E-21	BcellsTransformed_HapMapJPT	Unknown	Unknown

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Table S5. Gene analysis of the neighboring regions of the findings of this paper

lead SNP	CHR	Position	GENCODE name	RefSeq name	score (RegulomeDB)	#	D	is_enhry	stop	h3D	ref	alt	AFR	AMR	ASN	EUR	r3D	l3D	l3Dosome	coordinate	h3D	hits	regulome score	combined score
rs1623124	2	183209147	PDE1A	PDE1A	0.83	0.92	0	n333166	T	A	0.13	0.29	0.49	0.29	0.29	0.31	0.29	0.331166	2	183209146	n/a	7	7	
rs1623124	2	183209149	PDE1A	PDE1A	0.7	0.83	0	n333166	T	A	0.13	0.29	0.49	0.29	0.29	0.31	0.29	0.331166	2	183209147	StructuteDNase-seq	7	7	
rs1623124	2	183209191	PDE1A	PDE1A	0.88	0.94	0	n333168	T	A	0.29	0.3	0.5	0.29	0.29	0.31	0.29	0.331168	2	183209093	n/a	6	6	
rs1623124	2	183211364	PDE1A	PDE1A	0.6	0.78	0	n2021315410	A	ATC	0.29	0.6	0.42	0.29	0.29	0.68	0.29	0.20315410	2	183211344	n/a	6	6	
rs1623124	2	183211365	PDE1A	PDE1A	0.7	0.78	0	n2021315410	A	ATC	0.29	0.6	0.42	0.29	0.29	0.68	0.29	0.20315410	2	183211344	StructuteDNase-seq	7	7	
rs1623124	2	183212028	PDE1A	PDE1A	0.7	0.79	0.95	n12099636	T	C	0.29	0.6	0.42	0.29	0.29	0.68	0.29	0.2999836	2	183212027	n/a	7	7	
rs1623124	2	183213964	PDE1A	PDE1A	0.5	0.89	-0.95	n6730984	C	T	0.54	0.54	0.68	0.5	0.5	0.71	0.51	0.730984	2	183213979	n/a	5	5	
rs1623124	2	183215020	PDE1A	PDE1A	0.5	0.89	0.95	n2622434	C	T	0.51	0.51	0.68	0.5	0.5	0.71	0.51	0.730984	2	183215019	MoifsPWMFOXX1, MoifsPWMFHHT1FOXO1, MoifsPWM	5	5	
rs1623124	2	183218993	PDE1A	PDE1A	0.7	0.98	0.95	n11682598	G	C	0.12	0.27	0.4	0.29	0.29	0.44	0.29	0.43906	2	183218992	n/a	7	7	
rs1623124	2	183219667	PDE1A	PDE1A	0.6	0.99	1	n11682598	G	C	0.12	0.27	0.4	0.29	0.29	0.44	0.29	0.4162598	2	183219679	n/a	6	6	
rs1623124	2	183224127	PDE1A	PDE1A	5	0.9	1	n11682124	G	A	0.09	0.27	0.39	0.29	0.29	0.41	0.29	0.4162124	2	183224126	MoifsPWMFOxx1, MoifsPWMFHox1, MoifsPWMOTX	5	5	
rs1623124	2	183224130	PDE1A	PDE1A	0.8	0.96	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.4100303	2	183224129	n/a	6	6	
rs1623124	2	183233941	PDE1A	PDE1A	7	0.97	0.99	n7558737	A	T	0.21	0.29	0.41	0.29	0.29	0.59	0.29	0.558737	2	183239400	n/a	7	7	
rs1623124	2	183234074	PDE1A	PDE1A	5	0.98	0.99	n12474593	C	G	0.11	0.27	0.41	0.29	0.29	0.41	0.29	0.2474593	2	183234073	Protein_BindingChIP-seqSETD9	5	5	
rs1623124	2	183234075	PDE1A	PDE1A	5	0.98	0.99	n12099309	G	T	0.21	0.29	0.41	0.29	0.29	0.41	0.29	0.2099309	2	183234074	n/a	5	5	
rs1623124	2	183244332	PDE1A	PDE1A	5	0.98	0.99	n16821510	T	C	0.05	0.15	0.41	0.29	0.29	0.41	0.29	0.18821510	2	183244323	MoifsPWMGR, MoifsFotomindAR, MoifsPWMGli2, & MoifsPWMGR	5	5	
rs1623124	2	183249317	PDE1A	PDE1A	6	0.98	0.99	n5988347	C	T	0.15	0.27	0.41	0.29	0.29	0.41	0.29	0.5988347	2	183249316	MoifsPWPXPRXR, MoifsPWPXPRXR	6	6	
rs1623124	2	183250186	PDE1A	PDE1A	0.8	0.98	0.95	n11682598	AAAAA	TTT	0.05	0.15	0.41	0.29	0.29	0.41	0.29	0.41682598	2	183250185	n/a	5	5	
rs1623124	2	183250187	PDE1A	PDE1A	7	0.94	0.98	n11675903	T	C	0.02	0.15	0.35	0.29	0.29	0.41	0.29	0.1675903	2	183250186	n/a	7	7	
rs1623124	2	183250188	PDE1A	PDE1A	6	0.99	1	n11682598	G	C	0.12	0.27	0.4	0.29	0.29	0.41	0.29	0.1682598	2	183250187	MoifsPWMFET2, MoifsPWTET7, Chromatin_Structure	6	6	
rs1623124	2	183251024	PDE1A	PDE1A	5	0.9	1	n11682124	G	A	0.09	0.27	0.39	0.29	0.29	0.41	0.29	0.1682124	2	183251023	n/a	5	5	
rs1623124	2	183251247	PDE1A	PDE1A	0.8	0.96	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251246	MoifsPWMFHox1, MoifsPWMfox1, MoifsPWM	5	5	
rs1623124	2	183251248	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251247	n/a	5	5	
rs1623124	2	183251249	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251248	n/a	5	5	
rs1623124	2	183251250	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251249	n/a	5	5	
rs1623124	2	183251251	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251250	n/a	5	5	
rs1623124	2	183251252	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251251	n/a	5	5	
rs1623124	2	183251253	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251252	n/a	5	5	
rs1623124	2	183251254	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251253	n/a	5	5	
rs1623124	2	183251255	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251254	n/a	5	5	
rs1623124	2	183251256	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251255	n/a	5	5	
rs1623124	2	183251257	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251256	n/a	5	5	
rs1623124	2	183251258	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251257	n/a	5	5	
rs1623124	2	183251259	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251258	n/a	5	5	
rs1623124	2	183251260	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251259	n/a	5	5	
rs1623124	2	183251261	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251260	n/a	5	5	
rs1623124	2	183251262	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251261	n/a	5	5	
rs1623124	2	183251263	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251262	n/a	5	5	
rs1623124	2	183251264	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251263	n/a	5	5	
rs1623124	2	183251265	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251264	n/a	5	5	
rs1623124	2	183251266	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251265	n/a	5	5	
rs1623124	2	183251267	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251266	n/a	5	5	
rs1623124	2	183251268	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251267	n/a	5	5	
rs1623124	2	183251269	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251268	n/a	5	5	
rs1623124	2	183251270	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251269	n/a	5	5	
rs1623124	2	183251271	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251270	n/a	5	5	
rs1623124	2	183251272	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251271	n/a	5	5	
rs1623124	2	183251273	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	183251272	n/a	5	5	
rs1623124	2	183251274	PDE1A	PDE1A	5	0.98	1	n11682124	G	A	0.26	0.31	0.41	0.29	0.29	0.41	0.29	0.1682124	2	1832512				

Table S6. ENCODE supporting data on BP associated SNPs

Sentinel SNP	Chr	Genome position (hg19)	Highest scoring Proxy SNP	Combined functional score	RegulomeDB : Gene ID			Entrez_ID	Cardiovascular Disease (MESH)	Vascular Disease (MESH)	Hypertension (MESH)	Regulation of Blood Pressure (GO)	direct interactor with Hypertension MESH gene	MESH candidate	Functional Candidate (<4 score)	Literature Candidate	Druggable annotation
					Gene ID												
rs1682312	2	183210447	rs864417	5	0.77	0.93	Chromatin_Str PDE1A	5136	.	.	.	.	.	No	No	Yes	Class 2: tools available
rs2854275	6	32623223	rs9273327	1	0.59	0.77	Single_Nucleo HLA-DQB1	3119	.	.	.	.	.	No	Yes	Yes	Non-druggable
rs2854275	6	32713862	rs2854275				HLA-DRB4	3126	.	.	.	.	.	No	Yes	No	Non-druggable
rs2282978	7	92264410	rs2282978	2	1	1	Motifs|PWM|L| CDK6	1021	.	y	.	Y	Yes	Yes	Yes	Yes	Class 2: tools available
rs1022400	7	151403260	rs57807319	2	0.77	0.91	Motifs|Footprir PRKAG2	51422	.	.	.	Y	Yes	Yes	Yes	Yes	Non-druggable
rs4746172	10	75853796	rs10824069	5	0.98	1	Motifs|PWM|P VCL	7414	.	.	.	Y	Yes	No	Yes	Yes	Class 4 :predicted dru
rs4746172	10	75883129	rs201890718	3	0.92	0.96	Motifs|PWM|R AP3M1	26985	.	.	.	Y	Yes	Yes	No	Non-druggable	Class 2:tools available
rs4746172	10	75911680	rs3812639	2	0.5	0.96	Motifs|PWM|F ADK	132	.	.	.	Y	Yes	Yes	No	Non-druggable	Non-druggable
rs217727	11	1973484	rs217727				AK126915		.	.	.	.	No	Yes	No	Non-druggable	Non-druggable
rs217727	11	2002472	rs10840140	4	0.7	0.93	Motifs|Footprir MRPL23	6150	.	.	.	.	No	No	No	No	Non-druggable
rs217727	11	2011205	rs11564745	2	0.52	0.83	Motifs|PWM|Z| MRPL23-AS1	1E+08	.	.	.	.	No	Yes	No	Non-druggable	Non-druggable
rs217727	11	2021980	rs2525883	2	0.79	0.91	Motifs|Footprir H19	283120	.	.	.	Y	Yes	Yes	Yes	Yes	Non-druggable
rs757081	11	17230850	rs140613036	2	0.5	0.74	Motifs|PWM|C PIK3C2A	5286	.	.	.	.	No	Yes	No	Non	Class 3:Gene Related
rs757081	11	17260918	rs10832750	1	0.52	0.83	Single_Nucleo NUCB2	4925	.	.	.	Y	Yes	Yes	Yes	Yes	Class 4 :predicted dru
rs757081	11	17308259	rs757081				SNORD14A	26822	.	.	.	.	No	Yes	No	Non-druggable	Non-druggable
rs757081	11	17375260	rs10535629	2	0.57	-0.87	Motifs|Footprir NCR3LG1	374383	.	.	.	.	No	Yes	No	Non	Class 4 :predicted dru
rs757081	11	17405617	rs1002226	4	0.52	-0.81	Chromatin_Str KCNJ11	3767	Y	.	Y	Y	Yes	No	Yes	Yes	Class 1:Drug on Mark
rs3741378	11	65380124	rs1078457	4	0.52	0.93	Chromatin_Str MAP3K11	4296	.	.	.	Y	Yes	No	No	No	Class 2:tools available
rs3741378	11	65384727	rs12790427	2	0.56	0.99	Motifs|PWM|L| PCNXL3	399909	.	.	.	.	No	Yes	No	No	Class 4 :predicted dru
rs3741378	11	65408937	rs3741378	1	1	1	Chromatin_Str SIPA1	6494	.	.	.	.	No	Yes	No	Non	Non-druggable
rs3741378	11	65422591	rs7119750	4	0.9	0.97	Chromatin_Str RELA	5970	.	.	.	Y	No	No	Yes	Yes	Class 2:tools available
rs3741378	11	65484719	rs2236683	4	0.79	0.93	Chromatin_Str KAT5	10524	.	.	.	Y	Yes	No	No	No	Class 2:tools available
rs3741378	11	65499692	rs12361032	6	0.61	0.81	Motifs|PWM|P RNASEH2C	84153	.	.	.	.	No	No	No	No	Non-druggable
rs3741378	11	65549506	rs61895678	5	0.51	0.73	Motifs|PWM|A AP5B1	91056	.	.	.	.	No	No	No	No	Non-druggable
rs7297416	12	54417576	rs736825	3	0.6	0.91	Motifs|PWM|K HOXC5	3222	.	.	.	Y	Yes	Yes	No	No	Non-druggable
rs7297416	12	54424123	rs7308105	2	0.52	0.82	Motifs|PWM|Z| HOXC6	3223	.	.	.	Y	Yes	Yes	No	No	Non-druggable
rs7297416	12	54445215	rs199718335	2	0.79	0.95	Motifs|PWM|R HOXC4	3221	.	.	.	Y	Yes	Yes	No	No	Non-druggable
rs1036477	15	48793615	rs77360718	2	0.77	0.94	Motifs|Footprir FBN1	2200	Y	Y	.	Y	Yes	Yes	Yes	Yes	Non-druggable
rs33063	16	68197718	rs33063				LOC283970		.	.	.	.	No	Yes	No	No	Non-druggable
rs33063	16	69548788	rs7200764	7	0.7	0.86	No data CYB5B	80777	.	.	.	.	No	No	No	No	Non-druggable
rs33063	16	69590366	rs1549287	1	0.87	0.94	Single_Nucleo NFAT5	10725	.	.	.	Y	Yes	Yes	Yes	Yes	Non-druggable
rs33063	16	69742387	rs56125990	6	0.82	-0.9	Motifs|PWM|N NQO1	1728	.	.	.	Y	Yes	No	Yes	Yes	Class 1:Drug on Mark
rs33063	16	69775500	rs17299478	1	0.71	-0.86	Single_Nucleo NOB1	28987	.	.	.	.	No	Yes	No	Non	Non-druggable
rs33063	16	69795323	rs56140069	6	0.59	-0.82	Motifs|PWM|M WWP2	11060	.	.	.	.	No	No	Yes	Yes	Non-druggable