Supplemental Table 1. List of candidate genes analyzed in this study, grouped by indication (disease or pharmacology). Marker SNPs are all located in transcribed regions of the mature mRNA, or a splice variant. For some genes more than one marker SNP and tissue were used.

Name	Symbol	Indication	Tissue (number of heterozygous subjects)	Marker SNP	% het	Replicates (n) or assay validation
Cardiovascular disease candidate genes						
Angiotensin I converting enzyme	ACE	Blood pressure, CAD	Heart (31) Small bowel (32)	rs4309 (exon 9)	51 37 53	6 4 4
			Liver (10)	rs4343 (exon 17)	40	6
Monocyte chemoattractant protein 1	CCL2	CAD, SLE, inflammation, infection	Heart (29) Monocytes (26)	rs4586 (exon 2)	45	4
				rs13900 (3'UTR)	46	4
Superoxide dismutase, mitochondrial	SOD2	Oxidative stress, cancer	Heart (34)	rs4880 (exon 2)	52	4
				rs5746092 (5'UTR)	38	4
Nicotinamide *N*-methyltransferase	NNMT	Homocysteine levels	Liver (19) Small bowel (20)	rs4646335 (exon 1)	33	2
Lipoprotein lipase	LPL	Triglyceride, cholesterol metabolism	Heart (15)	rs1059611 (exon 10)	23	3
3-hydroxy-3-methylglutaryl-CoA reductase	HMGCR	Cholesterol synthesis, direct target (statins)	Liver (8) B-lymph (18)	rs12916 (exon 19)	23 20	1 1
Colony-stimulating factor, macrophage-specific	CSF1	Inflammation, endothelial function	Monocytes (18)	rs333970 (exon 6)	43	4
Prostaglandin D2 synthase	PTGDS	CAD	Heart (30)	rs6926 (exon 7)	46	2
Hypoxia-inducible factor 1, alpha subunit	HIF1A	Oxidative stress	Heart (18)	rs2057482 (exon 15)	28	2
Nitric oxide synthase, endothelial	NOS3	Oxidative stress, vascular function	Heart (22)	rs1799983 (exon 8)	34	4
FMS-related tyrosine kinase	FLT1	Endothelial function	Heart (19)	rs2296189 (exon 23)	29	2
L-type voltage-dependent calcium channel alpha subunit 1C	CACNA1C	Blood pressure	Heart (37)	rs1544514 (exon 4)	27	6
				rs216008 (exon 30)	40	6
Adrenergic receptor beta2	ADRB2	Blood pressure	Heart (22)	rs1042719 (exon1)	46	2
BK channel beta1 subunit	KCNMB1	Blood pressure	Heart (30)	rs11739136 (exon 3)	12	6
				rs2656842 (exon 4)	46	6
				rs2656841 (exon 4)	47	6
Vitamin K epoxide reductase	VKORC1	Warfarin target	Liver (29) Heart (26) B-lymph (12)	rs7294 (exon 3, 3'UTR)	40	6
Gamma-glutamyl carboxylase	GGCX	Blood coagulation	Liver (23)	rs699664 (exon 8)	40	2
Cholesteryl ester transfer protein	CETP	HDL cholesterol remodeling	Liver (29)	rs5884 (exon 14)	47	6
Heme oxygenase 1	HMOX1	Heme catabolism	Heart (5)	rs11555832 (3'UTR)	8	1

Drug metabolism candidate genes						
Multidrug resistance polypeptide 1, MDR1	ABCB1	Drug transporter	Liver (22)	rs1045642 (exon 26)	50	6
				rs1128503 (exon 12)	44	6
				rs2032582 (exon 21)	47	6
Cytochrome P450, subfamily 2D, polypeptide 6	CYP2D6	Drug metabolism	Liver (26)	rs1065852 (exon 1)	26	6
				rs1058164 (exon 3)	32	6
				rs16947 (exon 6)	37	6
				rs1135840 (exon 9)	30	6
Cytochrome P450, subfamily 2C, polypeptide 9	CYP2C9	Drug metabolism	Liver (19)	rs9332242 (exon 9)	11	4
				rs1057911 (exon 9)	9	4
Human peptide transporter 1	SLC15A1	Transporter	Small bowel (21)	rs1339067 (exon 17)	42	4
Human peptide transporter 2	SLC15A2	Transporter	Kidney (8)	rs1143670 (exon 14)	45	4
				rs1143671 (exon 15)	45	4
CNS disorder candidate genes						
Dopamine D2 receptor	DRD2	CNS	Prefrontal cortex, all lobes (30)	rs6277 (exon 7)	44	6
				rs6275 (exon 7)	33	4
				rs6279 (3' UTR)	31	6
Acetylcholine nicotinic receptor subunit a4	CHRNA4	CNS	Striatum (13)	rs1044393 (exon 5)	20	4
				rs1044397 (exon 5)	40	4
				rs2236196 (3' UTR)	44	4
mu Opioid receptor	OPRM1	CNS	All lobes, Pons (8)	rs1799971 (exon 1)	8	6
Serotonin receptor 2A	HTR2A	CNS	Prefrontal cortex (16)	rs6313 (exon 1)	15	2
Brain-derived neurotrophic factor	BDNF	CNS	All lobes (9)	rs6265 (exon 2)	35	4
Serotonin transporter	SLC6A4	CNS	Pons (29)	rs1042173 (3'UTR)	60	3
Tryptophan hydroxylase 2	TPH2	CNS	Pons (27)	rs7305115 (exon 7)	38	4
				rs4290270 (exon 9)	46	2
Norepinephrine transporter	SLC6A2	CNS	Pons (18)	rs5569 (exon 9)	38	2
Dysbindin 1	DTNBP1	CNS	Pons (9)	rs1047631(3'UTR)	15	2
Neuregulin 1	NRG1	CNS	Pons (8)	SNP8NRG433E1006 (exon 1)	17	2
Serotonin receptor 1B	HTR1B	CNS	Pons (16)	rs6296 (exon 1)	33	
Monoamine oxidase A	MAOA	CNS	Prefrontal cortex (19)	rs1137070 (exon 14)	47	3
				rs6323 (exon 8)	50	3
Dopamine D3 receptor	DRD3	CNS	Prefrontal cortex (21)	rs6280 (exon 2)	38	3
Estrogen receptor	ESR1	CNS	Prefrontal cortex (46)	rs3798577 (3'UTR)	44	3
Dopamine transporter	SLC6A3	CNS	Striatum (21)	rs6347 (exon 9)	54	3
Catechol-O-methyltransferase	COMT	CNS	Prefrontal cortex (10)	rs4633 (exon 3)	65	1
Diamine oxidase	DAO	CNS	Prefrontal cortex (21)	rs2070588 (5'UTR)	37	3
Glucocorticoid receptor	NR3C1	CNS/stress hormonal	Prefrontal cortex (20)	rs6196 (exon 8)	19	3
Nad(p)h:menadione oxidoreductase 1, dioxin-inducible 2	NQO2	CNS	B-lymph (9)	rs1143684 (exon 3)	30	1

Supplemental Table 2. Oligonucleotide primers used for PCR amplification and SNaPshot primer extension reactions. The reverse PCR primer also served for gene specific cDNA synthesis.

Symbol	Marker SNP(s)	Forward PCR primer	Reverse PCR primer	Extension primer
ACE	rs4309	5'TGAGATGGGCCATATACAGTACTAC3'	5'CCCGACGCAGGGAGAC3'	5'CTGCAGTACAAGGATCTGCC3'
	rs4343	5'CCCTTACAAGCAGAGGTGAGCTAA 3'(DNA); 5'ACCACCTACAGCGTGGCC3' (cDNA)	5'CATGCCCATAACAGGTCTTCATATT3'	5'GACGAATGTGATGGCCAC3'
MCP1 (CCL2)	rs4586	5'ATGCAATCAATGCCCCAGTC3'	5'GCGAGCCTCTGCACTGAGAT3'	5'AGATCTTCCTATTGGTGAAGTTATA3'
	rs13900	5'CAACCCAAGAATCTGCAGCTAA3'	5'GGCATAATGTTTCACATCAACAAAC3'	5'TAGCTTTCCCCAGACACC3'
SOD2	rs4880	5'GGTTGTTCACGTAGGCCG3'	5'CAGCAGGCAGCTGGCT3'	5'GAGCCCAGATACCCCAAA3'
	rs5746092	5'TTGCGGCGCAGCTGG3'	5'CTGAAGCCGCTGCCGAA3'	5'GGGCCTTAAGAAAGCGC3'
NNMT	rs4646335	5'GTCCTGTCTCTCTGAACTTTGGG3'	5'GAGCTGTATGCAATGCTTGCC3'	5'ATTGTAGACCAGAGGGAGCACT3'
LPL	rs1059611	5'TAAAGCAGCACATAGCACTGG3'	5'GCAGATAGCCACAATGACCTT3'	5'CCTTTCCAATATGTACAAGCTCC3'
HMGCR	rs12916	5'GCAAATATAAGCTGGGAAAAAAGTTT3'	5'AATTAACTACAAAATCAGGAGTTTCATCAG 3'	5'AAATCCATTTTCAACTGGCAGG3'
CSF1	rs333970	5'TTCCTCTCAGCATCTTCTCCAC3'	5'GGGCAGATGGATGGTCTGTC3'	5'GCCGGCAGATGTAACTGGTAC3'
PTGDS	rs6926	5'GGGCTGAAGCTGGGATC3'	5'CTGACTTGCTTCCGGAGTTT3'	5'CTCCCCGCCAAAGCA3'
HIF1A	rs2057482	5'CATTCCTTTTTTTGGACACTGGT3'	5'CAAGTTTGTGCAGTATTGTAGCCA3'	5'ATGTAGAAAATATAAATAGACTGCTTTA GGTA3'
NOS3	rs1799983	5'GAAACGGTCGCTTCGACGT3'	5'GGCAGAAGGAAGAGTTCTGGG3'	5'AGTAACCTTGGAACCTTGGTGCAGGCC CCAGATGA3'
FLT1	rs2296189	5'AATACTCCGTAAGACCACACGTC3'	5'ACTCGACTTCCTCTGAAATGGA3'	5'GCTGTAGATTTTGTCAAAGATAGATTC3'
CACNA1C	rs1544514	5'GAACGAGTGGAATATCTCTTTCTCATAA3'	5'GCGGAGGTAGGCATTGGG3'	5'CATAATTTTTACGGTGGAAGC3'
	rs216008	5'CCAGAGCTGCCTGTTCAAAAT3'	5'ATGAGCTTCAGGATCATCTCCAC3'	5'TGCTCTTCACTGGCCTCTT3'
ADRB2	rs1042719	5'TTCCAGGAGCTTCTGTGCCT3'	5'GCCGTTGCTGGAGTAGCC3'	5'TCTTCTTTGAAGGCCTATGG3'
KCNMB1	rs11739136	5'CAGGAATCCAAGTGCCACC3'	5'CCACAGGCATGGTACTGG3'	5'CCAACATCAGGGACCAGGAG3'
	rs2656842	5'AAGTAGAGCCATCCATCCATGC3'	5'GATTGGACTGGAAGAGTGGG3'	5'CTGCTCCCCACTTGCAG3'
VKORC1	rs7294	5'TTTTCCTAACTCGCCCGCT3'	5'TGGGTGTAAAAAAGAGCGAGC3'	5'CCTCCTCCTGCCATACCC3'
GGCX	rs699664	5'GAGTGGCCTCGGAAGCTG3'	5'GGAAACACTGGGCTGAGGG3'	5'GGTGTCCTACTGCCCCC3'
CETP	rs5884	5'TCACCATGGGCATTTGATT3'	5'CCACAGCGGT GATCATTGAC3'	5'TGAGAGCAGCTCCGAGTCC3'
HMOX1	Rs11555832	5'GGAGGTTTGAGACAGCTGCC3'	5'CTGCAGCAGAGCCTGGAAG3'	5'CTGCAGCAGAGCCTGGAAG3'
ABCB1	rs1045642	5'CCTATGGAGACAACAGCCGG3'	5'GGCATGTATGTTGGCCTCCT3'	5'CTCCTTTGCTGCCCTCAC3'
	rs1128503	5'TTTCTCACTCGTCCTGGTAGATCTT3'	5'ACTGTTTCCAACCAGGGCC3'	5'CTCTGCACCTTCAGGTTCAG3'
	rs2032582	5'TTGTTGAAATGAAAATGTTGTCTGG3'	5'CAATCATATTTAGTTTGACTCACCTTCC3'	5'TGAAAGATAAGAAAGAACTAGAAGGT3'
	rs2656841	5'AAGTAGAGCCATCCATCCATGC3'	5'GATTGGACTGGAAGAGTGGG3'	5'GCAGGTGGAGAAGGCATTG3'
CYP2D6	rs769258	5'TGTGTCCAGAGGAGCCCAT3'	5'GGCTCACCAGGAAAGCAAA3'	5'ACCGCCCGCCTGTGCCCATCA3'
	rs1058164	5'TGTGTCCAGAGGAGCCCAT3'	5'GGCTCACCAGGAAAGCAAA3'	5'CGAGCAGAGGCGCTTCTCCGT3'
	rs16947	5'TGTGTCCAGAGGAGCCCAT3'	5'GGCTCACCAGGAAAGCAAA3'	5'AGCTTCAATGATGAGAACCTG3'
	rs1135840	5'GGCCCAGCCACCATG3'	5'GCACAGCACAAAGCTCATAGGG3'	5'GTGTCTTTGCTTTCCTGGTGA3'
CYP2C9	rs9332242	5'GGATTTGTGTGGGAGAAGCC3'	5'TGAAACATAGGAAACTCTCC3'	5'AATGCCTTTTCTCACC3'
CYP2C9	rs2017319	5'GGATTTGTGTGGGAGAAGCC3'	5'TGAAACATAGGAAACTCTCC3'	5'GGCGGCACAGAGGCAAA3'
SLC15A1	rs1339067	5'ACATTTCTTCTCCTGGATCACCA3'	5'ACACTAGAAGCGTGTGGCGTT3'	F: 5'CTGGATCACCAGTCACTGC3'

				R: 5'CTGCTTGAAGTCGTCAGTTAC3'
SLC15A2	rs1143670	5'AGGAAAATGGCTGTTGGTATGATC3'	5'CGCAACTGCAAATGCCAG3'	5'GCTGTTGGTATGATCCTAGC3'
	rs1143671	5'GAAATGGCCCCAGCCC3'	5'CATCTGCCAGATTCAAGACTTGTAG3'	5'AACCTCCTGGGGACCTG3'
DRD2	rs6277	5'CCAGCTGACTCTCCCCGAC3'	5'GCATGCCCATTCTTCTCTGG3'	5'CGATCACATGTCGTGAACTGACTG ACTGGTTTGGCGGGGCTGTC3'
	rs6275	5'CCAGCTGACTCTCCCCGAC3'	5'GCATGCCCATTCTTCTCTGG3'	5'GGAGTGCTGTGGAGACC3'
	rs6279	5'AGCCTGAGTCAGGGCCC3'	5'ACCGCCTGCTCCACG3'	5'CCCAGAGGCTGAGTTTTCT3'
CHRNA4	rs1044393	5' TGAACATGCACAGCCGC3'	5' CGAAGGCATAGGTGATGTCC3'	5'TTGTAGGTGCCCACGGC3'
	rs1044397	5'CACATGCAAGAAGGAGCCCT3'	5' GGTGGTCTGCAATGTACTGGA3'	5'CCGCAGCACCAAAGC3'
	rs2236196	5' CCCTCTCCTAGCGAAGCAGAT3'	5' GGTCCTTGAGCCTCTCGGG3'	5'CTAGCGAAGCAGATTGGAGC3'
OPRM1	rs1799971	5'CCGTCAGTACCATGGACAGC3'	5'GAGTACGCCAAGGCATCAGT3'	F: 5'ACTGATCGACTTGTCCCACTTA GATGGC3'
				R: 5'ACTGACTGACTGACCATGGGTC GGACAGGT3'
HTR2A	rs6313	5'GACACCAGGCTCTACAGTAATGACTTT3'	5'TGTCCAGTTAAATGCATCAGAAGTG3'	5'ACTGACTGACTGGAACCTTGACT CATCAGAAGTGTTAGCTTCTCC3'
BDNF	rs6265	5'GCTTGACATCATTGGCTGACA3'	5'CTGGTCCTCATCCAACAGCTC3'	5'AACCTTGGAACCTTGGGGCTGACACT3'
SLC6A4	rs1042173	5'TATCTGTTTGCTTCTAAAGGTTTC3'	5'TGGACACACTATTTTTCATTTTAG	5'GGTTCTAGTAGATTCCAGCAATAAAATT 3'
TPH2	rs7305115	5'ACGAGACTTTCTGGCAGGACTG3'	5'TTAATTCTCCAATGGAGGAAAGGA3'	5'GATCCCCTCTACACCCC3'
	rs4290270	5'ACGAGACTTTCTGGCAGGACTG3'	5'TTAATTCTCCAATGGAGGAAAGGA3'	5'AAAGGAGTCCTGCTCCATA3'
SLC6A2	rs5569	5'ATGGGAGGCATGGAGGCTGTC3'	5'CGAGAAGGAAAGTGCTGAAGGTGAC3'	5'GGCATGGAGGCTGTCATCAC3'
DTNBP1	rs1047631	5'ATCCAGTTTTGGCTGTATGC3'	5'CTGTTCTTTAAGTTTCTCACACATT3'	5'TGTTTTATAGAGGTTCTTGATTTTTAC3'
NRG1	SNP8NRG433 E1006	5'CTGCTGCCACTACTGCTGCTGCT3'	5'CACCTTTCCCTCGATCACCA3'	5'TAGCACACCGAGGCCC3'
HTR1B	rs6296	5'CCACGTCCTCGGTCACCTCTATTAAC3'	5'CACAATAAAGGCTCCCAAAATGATCC3'	5'TCGAAATCCGGATCTCCTGTGTATGT3'
MAOA	rs1137070	5'AAATGGTCTCGGGAAGGTGA3'	5'TTTGATTCAGGTTCTTGTACCCAG3'	5'GGAAGGTGACCGAGAAAGA3'
	rs6323	5'ACTTCAGACCAGAGCTTCCAGC3'	5'ATGCACTTAATGACAGCTCCCA3'	5'GAGAAACCAGTTAATTCAGCG3'
DRD3	rs6280	5'TCTGCCCCACAGGTGTAGTTC3'	5'GGCATCTCTGAGCCAGCTG3'	5'ATCTCTGAGCCAGCTGAGT3'
ESR1	rs3798577	5'TGGTGTTGCATTTAGCCCTGG3'	5'AGCCACAACAATCCTGCACA3'	5'GGCATGGAGCTGAACAGTAC3'
SLC6A3	rs6347	5'TTCATCATCTACCCGGAAGCC3'	5'GAAGAAGACCACGGCCCAG3'	5'ACGCTCCCTCTGTCCTC3'
COMT	rs4633	5'GTGACACCAAGGAGCAGCG3'	5'TGTCAATGGCCTCCAGCAC3'	5'AGCGCATCCTGAACCA3'
DAO	rs2070588	5'GACGGGACTGATAACAGCAGC3'	5'CACAAGCATCCATTCATCCAA3'	5'CATCCAAGTCTCCCAACACT3'
NR3C1	rs6196	5'GGCAGTCACTTTTGATGAAACAGA3'	5'GAGTATTGAATTCCCCGAGATGTTAG3'	5'CAATCAGATACCAAAATATTCAAA3'
NQO2	rs1143684	5'GCTGCACCGTCACAGTGTCT3'	5'TGATATCTTTGTCTGTGGCCCTC3'	5'GTCTGATTTGTATGCCATGAAC3'