Table S3. Results of *in silico* analysis of genotype-specific gene expression, based on data obtained from the Genotype-Tissue Expression (GTEx) portal (release v10) [51] for selected SNPs included in the current work.

Gene	SNP	Tissue	Decreasing expression	NES	T statistic	*P*	P threshold
CYBA	rs7195830	Artery - Aorta	not statistically significant differences				
		Artery - Coronary	not statistically significant differences				
		Artery - Tibial	not statistically significant differences				
		Heart - Atrial Appendage	not statistically significant differences				
		Heart - Left Ventricle	not statistically significant differences				
		Whole Blood	not statistically significant differences				
	rs1049255	Artery - Aorta	not statistically significant differences				
		Artery - Coronary	not statistically significant differences				
		Artery - Tibial	not statistically significant differences				
		Heart - Atrial Appendage	not statistically significant differences				
		Heart - Left Ventricle	not statistically significant differences				
		Whole Blood	not statistically significant differences				
	rs1049254	Artery - Aorta	not statistically significant differences				
		Artery - Coronary	not statistically significant differences				
		Artery - Tibial	not statistically significant differences				
		Heart - Atrial Appendage	not statistically significant differences				
		Heart - Left Ventricle	not statistically significant differences				
		Whole Blood	not statistically significant differences				
	rs4673	Artery - Aorta	AG > GG > AA	-0.13	-6.0	4.32×10^{-9}	8.31×10^{-5}
		Artery - Coronary	not statistically significant differences				
		Artery - Tibial	AG > AA > GG	-0.06	-4.0	6.85×10^{-5}	1.23×10^{-4}
		Heart - Atrial Appendage	not statistically significant differences				
		Heart - Left Ventricle	not statistically significant differences				
		Whole Blood	not statistically significant differences				
	rs13306296	Artery - Aorta	GA > GG > AA	-0.18	-8.4	5.44×10^{-16}	8.31×10^{-5}
		Artery - Coronary	not statistically significant differences				
		Artery - Tibial	GG > GA > AA	-0.10	-7.3	1.16×10^{-12}	1.23×10^{-4}
		Heart - Atrial Appendage	GG > GA > AA	-0.17	-5.6	3.76×10^{-8}	7.83×10^{-5}
		Heart - Left Ventricle	GG > GA > AA	-0.18	-8.0	2.11×10^{-14}	6.23×10^{-5}
		Whole Blood	AA > GG > GA	-0.05	-4.7	3.01×10^{-6}	9.93×10^{-5}
	rs72811418	Artery - Aorta	not statistically significant differences				
		Artery - Coronary	not statistically significant differences				
		Artery - Tibial	not statistically significant differences				
		Heart - Atrial Appendage	not statistically significant differences				
		Heart - Left Ventricle	not statistically significant differences				
		Whole Blood	not statistically significant differences				
	rs16966671	Artery - Aorta	CG > CC > GG	0.10	4.5	7.92×10^{-6}	8.31×10^{-5}
		Artery - Coronary	not statistically significant differences				
		Artery - Tibial	GG > CG > CC	0.07	5.0	9.12×10^{-7}	1.23×10^{-4}
		Heart - Atrial Appendage	not statistically significant differences				
		Heart - Left Ventricle	GG > CG > CC	0.12	5.2	3.19×10^{-7}	6.23×10^{-5}

Gene	SNP	Tissue	Decreasing expression	NES	T statistic	*P*	P threshold
		Whole Blood	not statistically significant differences				
	rs9932581	Artery - Aorta	not statistically significant differences				
		Artery - Coronary	not statistically significant differences				
		Artery - Tibial	not statistically significant differences				
		Heart - Atrial Appendage	not statistically significant differences				
		Heart - Left Ventricle	not statistically significant differences				
		Whole Blood	not statistically significant differences				
XDH	rs206860	Artery - Aorta	lack of data				
		Artery - Coronary	lack of data				
		Artery - Tibial	lack of data				
		Heart - Atrial Appendage	lack of data				
		Heart - Left Ventricle	lack of data				
		Whole Blood	lack of data				
	rs207454	Artery - Aorta	lack of data				
		Artery - Coronary	lack of data				
		Artery - Tibial	lack of data				
		Heart - Atrial Appendage	lack of data				
		Heart - Left Ventricle	lack of data				
		Whole Blood	lack of data				
	rs1042039	Artery - Aorta	lack of data				
		Artery - Coronary	lack of data				
		Artery - Tibial	lack of data				
		Heart - Atrial Appendage	lack of data				
		Heart - Left Ventricle	lack of data				
		Whole Blood	lack of data				
	rs1054889	Artery - Aorta	lack of data				
		Artery - Coronary	lack of data				
		Artery - Tibial	lack of data				
		Heart - Atrial Appendage	lack of data				
		Heart - Left Ventricle	lack of data				
		Whole Blood	lack of data				
	rs2043013	Artery - Aorta	lack of data				
		Artery - Coronary	lack of data				
		Artery - Tibial	lack of data				
		Heart - Atrial Appendage	lack of data				
		Heart - Left Ventricle	lack of data				
		Whole Blood	lack of data				
	rs2073316	Artery - Aorta	lack of data				
		Artery - Coronary	lack of data				
		Artery - Tibial	lack of data				
		Heart - Atrial Appendage	lack of data				
		Heart - Left Ventricle	lack of data				
		Whole Blood	lack of data				
	rs2295475	Artery - Aorta	lack of data				

Gene	SNP	Tissue	Decreasing expression	NES	T statistic	*P*	P threshold
		Artery - Coronary		lack of data			
		Artery - Tibial		lack of data			
		Heart - Atrial Appendage		lack of data			
		Heart - Left Ventricle		lack of data			
		Whole Blood		lack of data			
	rs11904439	Artery - Aorta		lack of data			
		Artery - Coronary		lack of data			
		Artery - Tibial		lack of data			
		Heart - Atrial Appendage		lack of data			
		Heart - Left Ventricle		lack of data			
		Whole Blood		lack of data			
	rs45547640	Artery - Aorta		lack of data			
		Artery - Coronary		lack of data			
		Artery - Tibial		lack of data			
		Heart - Atrial Appendage		lack of data			
		Heart - Left Ventricle		lack of data			
		Whole Blood		lack of data			
	rs148756340	Artery - Aorta		lack of data			
		Artery - Coronary		lack of data			
		Artery - Tibial		lack of data			
		Heart - Atrial Appendage		lack of data			
		Heart - Left Ventricle		lack of data			
		Whole Blood		lack of data			
MPO	rs2333227	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
	rs34097845	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood	TT > CT > CC	-0.22	-5.0	8.29×10^{-7}	1.73×10^{-4}
SOD1	rs1041740	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
	rs2173962	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			

Gene	SNP	Tissue	Decreasing expression	NES	T statistic	*P*	P threshold
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood	CC > TT > TC	0.14	4.0	8.18×10^{-5}	1.48×10^{-4}
	rs9974610	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
	rs10432782	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
	rs17880487	Artery - Aorta		lack of data			
		Artery - Coronary		lack of data			
		Artery - Tibial		lack of data			
		Heart - Atrial Appendage		lack of data			
		Heart - Left Ventricle		lack of data			
		Whole Blood		lack of data			
	rs36232792	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
SOD2	rs4880	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
SOD3	rs1799895	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
	rs2284659	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial	TG > GG > TT	-0.10	-3.9	9.00×10^{-5}	1.49×10^{-4}
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			

Gene	SNP	Tissue	Decreasing expression	NES	T statistic	*P*	P threshold
		Whole Blood		not statistically significant differences			
	rs2536512	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
	rs2855262	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage	TT > TC > CC	-0.18	-4.0	7.84×10^{-5}	8.51×10^{-5}
		Heart - Left Ventricle	TC > TT > CC	-0.16	-4.4	1.23×10^{-5}	6.89×10^{-5}
		Whole Blood		not statistically significant differences			
CAT	rs769214	Artery - Aorta	AA > GA > GG	0.28	8.7	7.63×10^{-17}	1.25×10^{-4}
		Artery - Coronary	GA > AA > GG	0.22	5.4	1.97×10^{-7}	4.57×10^{-5}
		Artery - Tibial	AA > GA > GG	0.32	11.4	1.46×10^{-27}	1.85×10^{-4}
		Heart - Atrial Appendage	AA > GA > GG	0.31	10.6	3.89×10^{-23}	8.72×10^{-5}
		Heart - Left Ventricle	AA > GA > GG	0.27	10.3	5.07×10^{-22}	8.25×10^{-5}
		Whole Blood	AA > GA > GG	0.36	13.1	3.61×10^{-35}	1.40×10^{-4}
	rs1001179	Artery - Aorta	TT > CT > CC	0.28	6.5	1.93×10^{-10}	1.25×10^{-4}
		Artery - Coronary	CT > TT > CC	0.26	4.7	4.67×10^{-6}	4.57×10^{-5}
		Artery - Tibial	TT > CT > CC	0.27	7.1	3.20×10^{-12}	1.85×10^{-4}
		Heart - Atrial Appendage	TT > CT > CC	0.36	9.4	3.88×10^{-19}	8.72×10^{-5}
		Heart - Left Ventricle	TT > CT > CC	0.40	12.9	1.11×10^{-31}	8.25×10^{-5}
		Whole Blood	TT > CT > CC	0.47	13.2	7.15×10^{-36}	1.40×10^{-4}
	rs1049982	Artery - Aorta	CC > TC > TT	0.28	8.8	4.55×10^{-17}	1.25×10^{-4}
		Artery - Coronary	TC > CC > TT	0.22	5.3	2.78×10^{-7}	4.57×10^{-5}
		Artery - Tibial	CC > TC > TT	0.32	11.6	4.21×10^{-28}	1.85×10^{-4}
		Heart - Atrial Appendage	CC > TC > TT	0.31	10.7	1.20×10^{-23}	8.72×10^{-5}
		Heart - Left Ventricle	CC > TC > TT	0.26	10.2	8.75×10^{-22}	8.25×10^{-5}
		Whole Blood	CC > TC > TT	0.36	13.3	3.23×10^{-36}	1.40×10^{-4}
	rs7943316	Artery - Aorta	TT > AT > AA	0.27	8.3	1.13×10^{-15}	1.25×10^{-4}
		Artery - Coronary	AT > TT > AA	0.22	5.3	3.57×10^{-7}	4.57×10^{-5}
		Artery - Tibial	TT > AT > AA	0.29	10.4	1.67×10^{-23}	1.85×10^{-4}
		Heart - Atrial Appendage	TT > AT > AA	0.31	10.6	2.16×10^{-23}	8.72×10^{-5}
		Heart - Left Ventricle	TT > AT > AA	0.25	9.8	3.14×10^{-20}	8.25×10^{-5}
		Whole Blood	TT > AT > AA	0.35	13.0	9.44×10^{-35}	1.40×10^{-4}
GPX1	rs1050450	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
GCLC	rs17883901	Artery - Aorta		not statistically significant differences			

Gene	SNP	Tissue	Decreasing expression	NES	T statistic	*P*	P threshold
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
GCLM	rs41303970	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial	GG > GA > AA	-0.26	-7.7	5.89×10^{-14}	2.34×10^{-4}
		Heart - Atrial Appendage	GA > GG > AA	-0.21	-5.2	3.39×10^{-7}	1.35×10^{-4}
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
GSTP1	rs1695	Artery - Aorta	AA > AG > GG	-0.12	-5.4	1.32×10^{-7}	2.12×10^{-4}
		Artery - Coronary	AA > AG > GG	-0.21	-6.1	5.49×10^{-9}	8.58×10^{-5}
		Artery - Tibial	AA > AG > GG	-0.15	-9.5	4.40×10^{-20}	3.58×10^{-4}
		Heart - Atrial Appendage	AA > AG > GG	-0.24	-7.6	2.85×10^{-13}	2.08×10^{-4}
		Heart - Left Ventricle	AA > AG > GG	-0.16	-6.2	1.60×10^{-9}	1.63×10^{-4}
		Whole Blood		not statistically significant differences			
NOS3	rs1799983	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
	rs2070744	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage		not statistically significant differences			
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
	rs3918226	Artery - Aorta		not statistically significant differences			
		Artery - Coronary		not statistically significant differences			
		Artery - Tibial		not statistically significant differences			
		Heart - Atrial Appendage	CC > TT > CT	-0.31	-5.2	2.90×10^{-7}	7.11×10^{-5}
		Heart - Left Ventricle		not statistically significant differences			
		Whole Blood		not statistically significant differences			
	rs61722009	Artery - Aorta		lack of data			
		Artery - Coronary		lack of data			
		Artery - Tibial		lack of data			
		Heart - Atrial Appendage		lack of data			
		Heart - Left Ventricle		lack of data			
		Whole Blood		lack of data			

Legend: NES, normalized effect size; P threshold, GTEx tissue-specific significance threshold. "not statistically significant differences" - results that did not meet the tissue-specific significance threshold; "lack of data" - variants not available in GTEx (release v10) or genes not sufficiently expressed in a given tissue for eQTL testing.