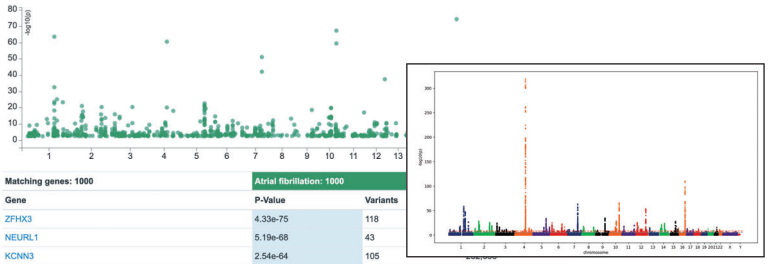
A What is the genetic architecture of a cardiovascular disease?

Phenotype page

Top common variant gene-level associations for Atrial fibrillation



Matching genes: 1000	Atrial fibrillation: 1000	
Gene	P-Value	Variants
ZFHX3	4.33e-75	118
NEURL1	5.19e-68	43
KCNN3	2.54e-64	105
PITX2	3.07e-61	14
SH3PXD2A	3.85e-60	87

Top pathways for Atrial fibrillation (Ancestry: All)

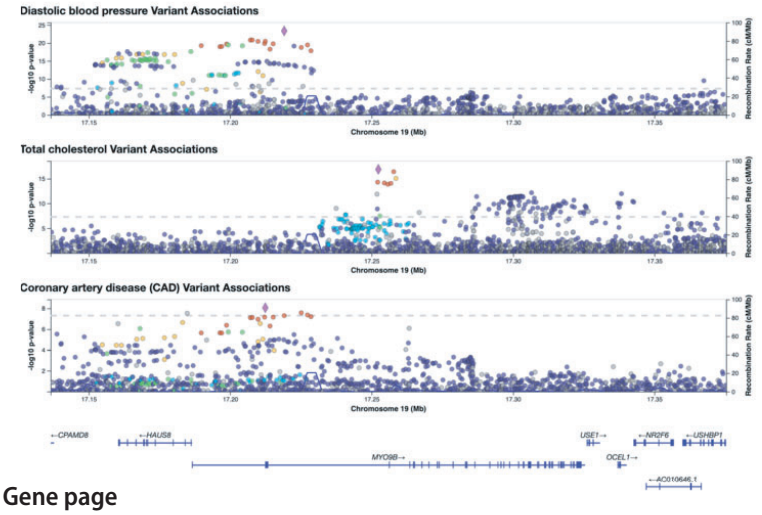
Pathway	P-Value	Beta	Standard error
HP_FIRST_DEGREE_ATRIOVENTRICULAR_BLOCK	4.29e-17	1.0668	0.1282
GOBP_MEMBRANE_REPOLARIZATION	7.35e-17	0.8681	0.1051
GOBP_CELL_CELL_SIGNALING_INVOLVED_IN_CARDIAC_CONDUCTION	2.42e-16	1.0944	0.1348
HP_ABNORMAL_ATRIOVENTRICULAR_CONDUCTION	4.59e-16	0.6640	0.0826
HP_SUPRAVENTRICULAR_ARRHYTHMIA	2.35e-15	0.5647	0.0721
HP_VENTRICULAR_TACHYCARDIA	2.83e-15	0.7616	0.0975
GOBP_REGULATION_OF_ATRIAL_CARDIAC_MUSCLE_CELL_MEMBRANE_DEPOLARIZATION	4.03e-15	2.0690	0.2664
HP_HEART_BLOCK	5.68e-14	0.5222	0.0703

Genetic correlations for Atrial fibrillation (Ancestry: All)

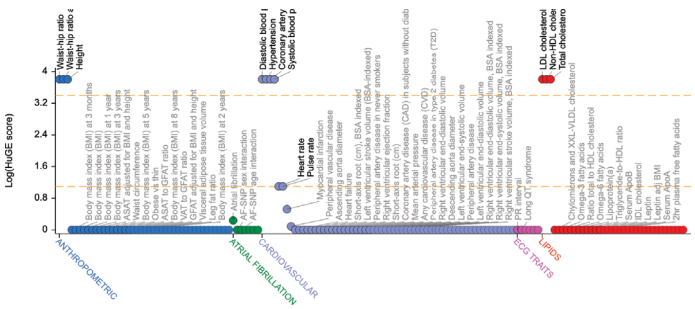
Phenotype	P-Value	Correlation	Standard error
Heart failure	3.30e-64	0.5001	0.0296
Weight	2.21e-30	0.2670	0.0233
Hypertension	5.81e-25	0.2626	0.0255
Height	2.25e-22	0.2126	0.0219
Hip circumference	1.87e-20	0.2415	0.0261
Hip circumference adj BMI	6.20e-14	0.2462	0.0328
Body mass index (BMI)	7.51e-14	0.1569	0.0210
Waist circumference	8.90e-14	0.1862	0.0250

B Is there human genetic evidence for a role of a gene in cardiovascular diseases?

Region page



Gene page



C What are the expert-predicted causal genes for a cardiovascular disease?

Effector gene lists

CARDIoGRAMplusC4D CAD effector gene predictions (Aragam et al., 2022)

Locus number	rsID	Locus	Nearest gene	Most likely causal gene	Known vs Novel gene	Number of features	Number of enriched tissues	Strongest tissue	Variants in 95% credible set	Lead SNP PPA	Evidence
180	rs7246865	19:17219105:A:G	MYO9B	MYO9B	Novel	3	4	HSMM	9	0.71	View

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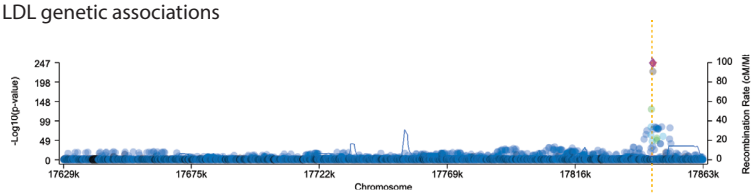
Variants	Nearest gene	Previous rare variant CAD association	Monogenic disorder	Drug or MR evidence
	MYO9B			
PoPS	Missense or protein-altering variant	Primary PoPS gene	Secondary PoPS gene	Mouse phenotype
		MYO9B	BST2	
eQTL	Top GTEx eQTL gene	Other GTEx eQTL genes	Top STARNET eQTL gene	Other STARNET eQTL genes
	MYO9B (TIB; SAF)			
PheWAS	UKBB PheWAS Diseases		UKBB PheWAS Continuous traits	
	Hypertension (+)		DBP (+) HbA1c (-) SBP (+)	

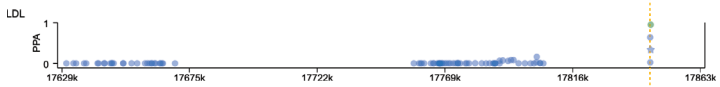
D How can I explore all available genetic and genomic data to prioritize genes in a region?

Variant Sifter

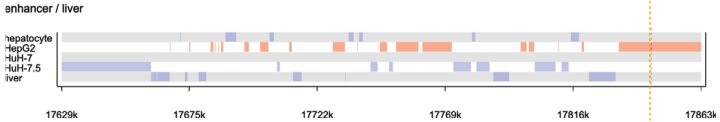
LDL genetic associations



LDL credible sets



Liver enhancers



Adipose links to *RRBP1*

Liver links to *RRBP1*