CardioGenBase consists of four major tools to fit the user needs. The tutorial for each of these tools are given below.

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ME	DISEASE	CVD GENE	GENE MAP	PER GENE EXPRESSION	DOCUMENTATION	OUR TEAM
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		* Se	lect Disease:	Select		_ 2
				Search		
	Gene Symbol	HGNC ID	ATP-binding c	Gene assette, sub-family A (ABC1), me	Description	
	ABCA4	34	ATP-binding ca	assette, sub-family A (ABC1), me	mber 4	
	ABCB1	40	ATP-binding ca	assette, sub-family B (MDR/TAP),	member 1	
	ABCG1	73	ATP-binding ca	assette, sub-family C (CFTR/MRP assette, sub-family G (WHITE), m), member 6 Iember 1	
	ABCG2	74	ATP-binding ca	assette, sub-family G (WHITE), m	ember 2 (Junior blood ar	
	ABCG8	12007				oup)
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	ABO ACAT1 ACE2 ACHE	11320 79 93 2707 13557 108	ATP-binding ca Abl-interactor ABO blood grou 1-3-galactosy Acetyl-CoA ac Anglotensin I o Acetylcholines	assette, sub-family G (WHITE), m 1 up (transferase A, alpha 1-3-N-a transferase) etyltransferase 1 converting enzyme converting enzyme 2 terase (Yt blood group)	ember å	sferase; transferase B,
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	ABO ACAT1 ACE ACE2 ACHE ACP1 ACPP ACTA1 ACTA2	13320 79 63 2707 13557 108 122 125 128 130	ATP-binding cc Abl-interactor AbD blood grou 1-3-galactosy Acetyl-CoA ac Angiotensin 1 c Angiotensin 1 c Acetylcholines Acid phosphat Acid phosphat Actin, alpha 2.	assette, sub-family G (WHITE), m 1 up (transferase A, alpha 1-3-N-al transferase) etyltransferase 1 sonverting enzyme 2 terase (Yt blood group) ase 1, soluble ase, prostate skeletal muscle amooth muscle, aorta	ember, ä	sferase; transferase B,
	ABD ACAT1 ACE ACE2 ACHE ACP1 ACP1 ACTA1 ACTB	13320 79 03 2707 13557 108 122 125 129 130 130	ATP-binding cc Abb-interactor Abb blood grou 1-3-galactosy Acetyl-CoA ac Angiotensin I c Angiotensin I c Acetylcholines Acid phosphat Acid phosphat Acid phosphat Acid, alpha 1, Actin, alpha 2, Actin, beta	assette, sub-family G (WHITE), m 1 up (transferase A, alpha 1-3-N-a transferase) etyltransferase 1 converting enzyme converting enzyme terase (Yt blood group) ase 1, soluble ase, prostate skeletal muscle smooth muscle, aorta	ember, ä	sferase; transferase B,
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Figure A Disease Finder

1) Click **Disease** tab

- 2) Select disease of interest
- 3) click Search
- 4) In results, click the gene symbol for more details

Figure B CVD GENE Finder

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CVD gene helps the user to identify literature evidences for the gene of interest.

1) Click CVD GENE tab

- 2) Select disease of interest
- 3) Choose entry type, Gene symbol or HGNC ID
- 4) Enter the gene
- 5) Click **Find** to retrieve result

The result includes molecular information such as gene description, ontology, literature, SNPs, protein interaction network, gene-drug interaction, molecular pathways, normal gene and protein expression in various tissues and body fluids.

Figure C Gene Mapper

Gene Mapper enables users to identify cardiovascular disease associated genes. Multiple query genes could be searched at once.



- 1) click Gene Mapper Tab
- 2) Enter multiple genes separated by comma
- 3) Click Search Genes for results

The result show input list, disease gene as Venn diagram. Further, the number of articles for the each query gene is provided.

Figure D Gene Expression Finder

This tool enables users to identify the gene expression in various microarray experiment associated to cardiovascular disease conditions.

Car	dioGe	nBas	e Literature	based multi-omics	database for major ca A molecular info	ardiovascular diseases: prmation retrieval system
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- 1) Click Gene Expression tab
- 2) Choose a disease
- 3) Select a experiment of interest
- 4) Enter a gene symbol5) Click Find Expression