

## Supplementary Materials

**Table S1. Target genes of miRNAs in CPP and CSP predicted by TargetScanVert, miRDB and miRWalk (the target names are arranged in alphabetical order).**

ID	Expression	Target
hsa-let-7a-5p	↓	A1CF
		AAK1
		ABCC5
		ABHD17C
		ABL2
		ACER2
		ACSL6
		ACVR1C
		ADAMTS15
		ADIPOR2
		ADRB1
		ADRB2
		ADRB3
		AEN
		AFF2
		AGAP1
		AHCTF1
		AIFM1
		AKAP6
		AMER3
		AMMECR1L
		AMOT
		AMT
		ANKFY1
		ANKRD46
		ANKRD52
		AP1S1
		APBA1
		ARG2
		ARHGAP28
		ARHGEF15
		ARHGEF38
		ARID3A
		ARID3B
		ARL4D
		ARMC8
		ARPP19
		ASAP1
		ATAD2B
		ATP2A2
		ATP2B4
		ATP6V1C1
		ATP8B4
		B3GAT3
		B3GNT7
		BACH1

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BBX  
BCAP29  
BCAT1  
BCL2L1  
BCL7A  
BEND4  
BIN3  
BRWD3  
BSN  
BTBD3  
BTBD9  
BZW1  
BZW2  
C14orf28  
C15orf39  
C19orf47  
C20orf194  
C5orf51  
CACNA1E  
CACNA1I  
CACNB4  
CADM2  
CALU  
CAPN3  
CASKIN1  
CBFA2T3  
CBX5  
CCND1  
CCND2  
CCNJ  
CCNT2  
CCNY  
CCR7  
CDC25A  
CDC34  
CDKN1A  
CDV3  
CEP164  
CERCAM  
CFL2  
CGNL1  
CHD4  
CHIC1  
CHRD  
CHSY3  
CLASP2  
CLCN5  
CLDN12  
CLOCK  
CLP1  
CNOT6L  
CNTRL

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COIL  
COL14A1  
COL1A1  
COL1A2  
COL27A1  
COL4A1  
COL4A2  
COL4A6  
COL5A2  
COL9A1  
CPA4  
CPEB1  
CPEB2  
CPED1  
CPM  
CPSF4  
CRB2  
CRK  
CRTAP  
CRY2  
CSRNP3  
CYB561D1  
DAGLA  
DAPK1  
DARS2  
DCAF15  
DCUN1D3  
DDI2  
DDX19A  
DDX19B  
DHX57  
DICER1  
DKK3  
DLC1  
DLGAP4  
DLST  
DMD  
DOCK3  
DPH3  
DPP3  
DST  
DTX4  
DUSP16  
DUSP22  
DUSP7  
DVL3  
DYRK1A  
DYRK2  
E2F2  
E2F5  
E2F6  
EDEM3

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EDN1  
EEA1  
EEF2K  
EGLN2  
EGR3  
EIF2S2  
EIF4G2  
ELF4  
ELK4  
ELOVL4  
ENTPD7  
EOGT  
EPHA3  
EPHA4  
ERCC4  
ERCC6  
ERGIC1  
ESPL1  
ETNK1  
ETNK2  
FAM104A  
FAM118A  
FAM135A  
FAM189A1  
FAM214B  
FASLG  
FAXC  
FBXO30  
FBXO32  
FBXO45  
FGD6  
FGF11  
FIGN  
FKRP  
FNDC3A  
FNDC3B  
FNIP1  
FNIP2  
FOXP2  
FRAS1  
FREM2  
FRMD4B  
FRMD5  
FRS2  
FZD3  
FZD4  
GAB2  
GABPA  
GABRA6  
GALNT1  
GALNT15  
GALNT4

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GAN  
GAS7  
GCNT4  
GDAP2  
GDPD1  
GHR  
GIPC1  
GJC1  
GLRX  
GNG5  
GNPTAB  
GOLGA4  
GOLT1B  
GPATCH3  
GPR132  
GPR156  
GPR26  
GRAMD1B  
GRID2IP  
GRIN3A  
GRPEL2  
GTF2I  
GYG2  
HAS2  
HDLBP  
HDX  
HECTD2  
HELZ  
HIC2  
HIF1AN  
HIF3A  
HIP1  
HK2  
HMGA1  
HMGA2  
HOOK1  
HOXA1  
HOXA9  
HOXD1  
HS2ST1  
HTR1E  
ICMT  
IGDCC3  
IGDCC4  
IGF1  
IGF1R  
IGF2BP1  
IKZF2  
IL10  
IL13  
IMPG2  
INPP5A

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INSR  
INTS2  
IRS2  
ITGB3  
ITGB8  
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KATNBL1  
KCNC1  
KCNC2  
KCNJ11  
KCNJ3  
KCNQ4  
KCTD16  
KCTD21  
KHNYN  
KIAA0930  
KIAA1549  
KIAA1958  
KIF21B  
KLF8  
KLF9  
KLHDC8B  
KLHL31  
KLHL6  
KLK10  
KMT2D  
KPNA1  
KREMEN1  
L2HGDH  
LBH  
LBR  
LCORL  
LDB1  
LEPROTL1  
LIMD2  
LIMK2  
LIN28A  
LIN28B  
LINGO1  
LIPH  
LIPT2  
LMLN  
LMX1A  
LOXL4  
LPGAT1  
LRFN4  
LRIG2  
LRIG3  
LRRC8B  
LSM11  
LYVE1  
MAP3K1

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MAP3K2  
MAP3K3  
MAP3K9  
MAP4K3  
MAP4K4  
MAPK8  
MARS2  
MBD2  
MBTPS2  
MDFI  
MDM4  
MED28  
MED6  
MEF2C  
MEIS2  
MEX3A  
MGA  
MGAT4A  
MGLL  
MIB1  
MIEF1  
MLLT10  
MMP11  
MON2  
MRS2  
MSI2  
MTDH  
MTUS1  
MXD1  
MYCBP  
MYCN  
MYO1F  
MYO5B  
MYRIP  
NAA30  
NAP1L1  
NAT8L  
NDST2  
NEK3  
NGF  
NIPA1  
NIPAL4  
NKD1  
NKIRAS2  
NME4  
NME6  
NPEPL1  
NR6A1  
NRAS  
NRK  
NSD1  
NYNRIN

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OLR1  
ONECUT2  
OSBPL3  
OSMR  
OSTF1  
OTOF  
P2RX1  
P4HA2  
PAG1  
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PALM3  
PAPPA  
PARD6B  
PARM1  
PARP8  
PAX3  
PBX1  
PBX2  
PBX3  
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PCDH20  
PCGF3  
PDE12  
PDGFB  
PDP2  
PDPR  
PEG10  
PEX11B  
PGM2L1  
PGRMC1  
PIGA  
PIK3CA  
PIK3IP1  
PITPNM3  
PKN2  
PLAGL2  
PLCXD3  
PLD3  
PLD5  
PLEKHA8  
PLEKHG7  
PLEKHH1  
PLEKHO1  
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POGLUT1  
POGZ  
POLR2D  
POLR3D  
POTEM

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PPP1R15B  
PPP1R16B  
PPP2R2A  
PPP3CA  
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PRDM5  
PRKAA2  
PRLR  
PRPF38B  
PRRX1  
PRSS22  
PTAFR  
PTPRD  
PXDN  
PXT1  
RAB11FIP4  
RAB40C  
RAB8B  
RAG1  
RALB  
RANBP2  
RASGRP1  
RB1  
RBFOX1  
RBFOX2  
RBMS1  
RBMS2  
RDH10  
RDX  
RFX6  
RGS16  
RGS6  
RNF165  
RNF170  
RNF20  
RNF217  
RNF38  
RNF44  
RORC  
RPS6KA3  
RPUSD2  
RRM2  
RSPO2  
RUFY3  
SALL4  
SAMD12  
SBK1  
SBNO1  
SCN4B

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SCN5A  
SCYL3  
SDK1  
SEC31B  
SECISBP2L  
SEMA4C  
SEMA4F  
SEMA4G  
SENP2  
SENP5  
SESN3  
SFMBT1  
SH2B3  
SKIDA1  
SKIL  
SLC10A7  
SLC12A9  
SLC16A14  
SLC16A9  
SLC1A4  
SLC20A1  
SLC22A23  
SLC25A24  
SLC30A4  
SLC31A1  
SLC35D2  
SLC38A9  
SLC45A4  
SLC52A3  
SLC5A6  
SLC5A9  
SLC7A14  
SLK  
SMAD2  
SMARCAD1  
SMC1A  
SMCR8  
SMIM13  
SMUG1  
SNAP23  
SNX16  
SNX30  
SNX6  
SOCS1  
SOCS4  
SOCS7  
SOWAHA  
SOX13  
SOX6  
SPATA2  
SPEG  
SPRYD4

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STK40  
STOX2  
STRBP  
STRN  
STX17  
STX3  
STXBP5  
SUB1  
SULF2  
SURF4  
SYNCRIP  
SYT1  
SYT11  
SYT2  
SYT7  
TAB2  
TAF9B  
TBX5  
TEAD3  
TECPR2  
TENM2  
TET2  
TET3  
TEX261  
TGDS  
TGFBFR1  
TGFBFR3  
THBS1  
TMC7  
TMED5  
TMEM167A  
TMEM234  
TMEM41A  
TMEM65  
TMOD2  
TMPRSS2  
TMX4  
TNFSF9  
TP53  
TPP1  
TRABD  
TRANK1  
TRHDE

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TRIB2  
TRIM67  
TRIM71  
TRPM6  
TSC1  
TSC22D2  
TSPAN18  
TSPAN2  
TSPEAR  
TSPYL5  
TTL  
TTLL4  
TUSC2  
TXLNA  
TXLNG  
UBE2G2  
UGCG  
UGGT1  
UHRF2  
USP12  
USP24  
USP32  
USP38  
USP44  
USP49  
UTRN  
VASH2  
VAV3  
VGLL3  
VSNL1  
WARS2  
WDR37  
WIP1  
WNK3  
WNT9B  
XK  
XKR8  
XRN1  
XYLT1  
YOD1  
YPEL2  
YTHDF3  
YY1  
ZBTB10  
ZBTB39  
ZBTB8B  
ZC3H3  
ZFYVE26  
ZNF10  
ZNF200  
ZNF202

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		ZNF275
		ZNF280B
		ZNF322
		ZNF341
		ZNF516
		ZNF566
		ZNF583
		ZNF641
		ZNF644
		ZNF652
		ZNF689
		ZNF710
		ZNF784
		ZSWIM
hsa-mir-34a-5p	↑	ACVR2B
		ADAM10
		AFF4
		ALCAM
		AP3S2
		AREG
		ASB1
		ATXN7
		ATXN7L3
		BCL2
		BMP3
		BTBD11
		C14orf28
		C3orf70
		CACNA1E
		CACNB3
		CALCR
		CAMK4
		CCDC85A
		CDC25A
		CDH4
		CDIP1
		CNOT6
		CNTNAP2
		CR2
		CRHR1
		CTDSP2
		DCAF7
		DDX17
		DLL1
		E2F3
		E2F5
		ELL2
		ERGIC1
		FAT3
		FOXN2
		FOXN3
		FRK

		FUT9 GABRA3 GAS1 GMNC GNAQ GPR85 HS2ST1 HSBP1 IGFBP3 ISY1-RAB43 JAG1 LDHA LMAN1 LRRC55 MCIDAS MET MGAT4A NPNT PDGFRA PEG10 PGRMC2 PPP3R1 PREB RAB43 RGS17 RRAS RSPO4 SCML2 SCN1A SDK2 SERPINE1 SERPINF2 SHANK3 SHISA7 SIDT2 SLCO3A1 SMIM15 SNTB2 SPRN TMEM200B TNRC18 TP73 UNC13C VAT1 VPS4A
hsa-mir-155-5p	↑	AAK1 ACTA1 AICDA ANKRD6 ANTXR2 ATP6V1G1

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ATXN1L  
BACH1  
BAIAP2L1  
BCORL1  
BDNF  
BNC2  
BRD1  
C6orf89  
CACNA2D1  
CARHSP1  
CBL  
CD99L2  
CHD8  
CHD9  
CKAP5  
COPS3  
CREBRF  
CSF2RB  
CSRNP2  
CYB561D1  
DET1  
DMTF1  
DNAJB1  
DUSP14  
DYNC1I1  
EMP2  
FAM135A  
FAM168A  
FBXL17  
FBXO11  
FBXO33  
FUT9  
FXR1  
GABRA1  
GNAS  
GPM6B  
HERC4  
HIF1A  
HIVEP2  
HNRNPA3  
IKBKE  
IL6ST  
INPP5D  
ITK  
KANSL1  
KCNA1  
KDM2A  
KDM5B  
KLF3  
KLHL8  
KPNA1  
KSR1

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LCORL  
LRP1B  
LRRC8B  
MBNL3  
MEF2A  
MEIS1  
MIER3  
MMP16  
MORC3  
MSI2  
MYLK  
NAA50  
NDFIP1  
NFASC  
NFIA  
NR3C2  
NRG3  
OTUB2  
PARD3B  
PELI1  
PIAS1  
PICALM  
PTPRJ  
QKI  
RAB11FIP2  
RAB3B  
RAP1B  
RAPGEF2  
RBAK  
RBMS3  
RCN2  
RCOR1  
RELA  
RFX3  
RGP1  
RORA  
RPS6KA3  
RPS6KA5  
RREB1  
RTKN2  
SALL1  
SATB1  
SEMA5A  
SEPHS1  
SGIP1  
SGK3  
SHOX  
SLC12A6  
SMAD1  
SMAD2  
SMAD5  
SMARCA4

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		SOCS1 SOX10 SP3 SPI1 STXBP5L SUFU SYVN1 TBR1 TBRG1 TCF4 TCF7L2 TENM3 TERF1 TLE4 TM9SF3 TP53INP1 TRIM23 TRIM32 TRPS1 TSHZ3 TSPAN14 UPP2 USP48 USP9X VAV3 WNK3 XKR4 YWHAZ ZBTB38 ZIC3 ZNF236 ZNF618 ZNF652 ZPLD1 ZSWIM6
hsa-mir-103a-3p	↓	ABHD2 ABL2 ACER3 ACOX1 ACTG1 ACVR2B ADAMTSL3 ADCYAP1 AFF4 AGFG1 AK2 AKIRIN2 AMMECR1 AMOT ANK1 ANK3 ANKFY1

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ANO3  
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APPL1  
AQP11  
ARHGAP17  
ARHGAP19  
ARHGAP32  
ARHGAP5  
ARIH1  
ARIH2  
ARL8A  
ARMC1  
ARMC8  
ASH1L  
ASIC1  
ATP13A3  
ATXN1  
ATXN1L  
ATXN7L1  
AVL9  
BACH2  
BAZ2A  
BAZ2B  
BCAT2  
BCL2L13  
BDNF  
BLMH  
BOLA3  
BTG2  
BTLA  
BTRC  
C16orf72  
C2CD5  
CAB39  
CACNA1C  
CACNA2D1  
CALU  
CAMK2G  
CAMKK1  
CAPZA2  
CARM1  
CC2D1B  
CCDC50  
CCDC6  
CCNJ  
CCNYL1  
CDC37L1  
CDK14  
CDK6  
CDK8  
CELSR2  
CEP85L

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CHD1  
CHD2  
CHD6  
CHIC1  
CHRM1  
CHST11  
CLIP1  
CLOCK  
CNNM2  
CNTNAP1  
COBLL1  
CORO2B  
CPEB3  
CRELD1  
CSNK1G2  
CSNK1G3  
CTNND1  
CUL4A  
DCBLD2  
DCP1A  
DCUN1D3  
DESI1  
DICER1  
DKK1  
DLEU7  
DLG5  
DLL1  
DNAJB4  
DNAJC3  
DPP8  
DSC3  
DYNC1LI2  
DYRK2  
EBF1  
EIF4B  
EIF5  
ELK4  
ENPP2  
ENTPD4  
ENTPD7  
ERLIN1  
ESR1  
ETF1  
ETNK1  
EVA1A  
FAF2  
FAM104A  
FAM110C  
FAM117B  
FAM189B  
FAM81A  
FAM98A

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FAT4  
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FBXL20  
FBXW7  
FERMT2  
FEZF1  
FGF2  
FGF7  
FLOT2  
FOXJ2  
FOXP1  
FRYL  
FUCA2  
FURIN  
G3BP2  
GABRG2  
GALNT7  
GATAD2A  
GATAD2B  
GGA3  
GIT2  
GLRA2  
GNPNAT1  
GNS  
GPC6  
GPCPD1  
GPR12  
GPR6  
GRIN2A  
GSKIP  
GSTCD  
HELZ  
HERC2  
HIC2  
HMGA1  
HMGA2  
HTT  
IGSF3  
IHH  
IRF2BP2  
JAKMIP2  
KANK4  
KAT7  
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KIF21A  
KIF23  
KIF3B  
KIF5A  
KIF5C  
KLF4  
KLF7  
KPNA1

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KPNA3  
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LIN28A  
LONRF1  
LRP1B  
LRRC15  
MAPK8  
MBNL1  
MBNL2  
MBNL3  
MCFD2  
MED26  
MEF2D  
MFN2  
MIF4GD  
MMS19  
MSI2  
MTFR1L  
MTMR3  
MTMR4  
MYBL1  
MYH9  
N4BP1  
NAA15  
NAA20  
NAV2  
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NEDD9  
NF1  
NFAT5  
NFIA  
NFIB  
NOS1  
NOVA1  
NPAS2  
NPAS3  
NR1D2  
NR2C2  
NR4A3  
NRIP1  
NSG1  
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OSBPL6  
OTUD4  
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PAG1  
PAK3

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PCGF2  
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PDE3B  
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PDK3  
PDK4  
PDS5A  
PDZD8  
PGRMC2  
PHF20  
PHYHIPL  
PIK3R1  
PITPNA  
PLCB1  
PLEKHA1  
POLDIP2  
PPIP5K2  
PPP2R5C  
PPP6C  
PPP6R2  
PRKAB2  
PRKCE  
PRKG1  
PRPF4B  
PRR14L  
PRRT2  
PSMF1  
PTH  
PTPN4  
PURB  
RAB10  
RAB1B  
RAB30  
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RAI14  
RAN  
RAP2C  
RASSF5  
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RCAN1  
REST  
RIMS3  
RNF125  
RNF157  
RNF38  
RORA

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RPUSD1  
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RSPO3  
RUNX1T1  
RYBP  
SALL1  
SALL4  
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SBNO1  
SCAF8  
SCAMP5  
SCN1A  
SCN2A  
SDCBP  
SEC22C  
SEMA6A  
SETD5  
SGMS2  
SH3BP4  
SH3BP5  
SIK2  
SIPA1L2  
SIX4  
SLC20A2  
SLC25A37  
SLC26A7  
SLC2A14  
SLC2A3  
SLC35A3  
SLC35G1  
SLC44A1  
SLC45A4  
SLITRK1  
SMARCE1  
SNCG  
SNRK  
SNX12  
SNX18  
SNX3  
SOWAHC  
SOX6  
SPATS2L  
SPRY2  
SPRY3  
SREK1  
SRGAP1  
ST3GAL2  
ST8SIA3  
STAG1  
STRIP1  
STRN  
SUN2

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SUZ12  
SV2C  
SVEP1  
SYDE2  
SYNDIG1  
TAOK3  
TBKBP1  
TDG  
TGIF2  
TGM3  
THOC2  
THSD7A  
THY1  
TJP1  
TLK1  
TM7SF3  
TMEM260  
TMEM47  
TNPO1  
TNRC6B  
TPD52  
TRAF3  
TRIAP1  
TRIM71  
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TTLL7  
TWF1  
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UBE4A  
UBL3  
UBR3  
UBR4  
UGGT1  
UHMK1  
UMOD  
UNC80  
UPF2  
USP42  
VAMP8  
VCAN  
VCL  
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ZBTB39  
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ZC3H7B  
ZCCHC2

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		ZNRF3
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		AAK1
		ABCC1
		ABCG1
		ABCG4
		ABL2
		ACKR2
		ACTN4
		ADAM19
		ANKFY1
		ANKRD34A
		APP
		APPL1
		ARMC8
		ATP6V1F
		ATP8B1
		BCORL1
		BEND3
		BICD1
		BMPR1A
		BSN
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		CA10
		CADM4
		CAMK1G
		CAMK2D
		CAPZB
		CBX5
		CCDC6
		CCND2
		CDC42
		CDC42EP3
		CDKN2AIP
		CDS1
		CNTD1
		CNTN2
		CORO2B
		CREBRF
		CSMD2
		CTSE
		CTSK
		DAB2IP
		DCTN3
		DGKB

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DLG2  
DNM1  
DYNLL2  
DYRK1B  
EIF4B  
ELAVL3  
ELOVL4  
EMC10  
ENAH  
EPHB2  
ERBB4  
FAIM2  
FAM168A  
FAM210A  
FAM76A  
FBXL20  
FBXO28  
FBXW2  
FZD1  
GALNT10  
GNA13  
GOSR1  
GPR12  
GPR26  
HIC2  
HNRNPD  
HOOK3  
HP1BP3  
IGF2R  
IKZF4  
IRAK1  
JOSD1  
KCNN3  
KDM2B  
KIF3C  
KLC1  
KLF7  
KLF7  
KLK5  
LCOR  
LCOR  
LIF  
LPCAT3  
LRRC15  
LSAMP  
MAPK14  
MAT2A  
MDM4  
MLLT3  
MMP16  
MSI1  
MYBL1

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MYLK  
MYO18A  
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NFATC3  
NFIX  
NMNAT2  
NOVA1  
NR6A1  
NRSN1  
NSD1  
NUCKS1  
PAK6  
PARS2  
PAX2  
PAX5  
PBX2  
PCDH10  
PCDHA1  
PCDHA10  
PCDHA11  
PCDHA12  
PCDHA13  
PCDHA2  
PCDHA3  
PCDHA4  
PCDHA5  
PCDHA6  
PCDHA7  
PCDHA8  
PCDHA9  
PCDHAC1  
PCDHAC2  
PHLDB1  
PHLPP2  
PITPNA  
PLA2G2F  
PPM1L  
PPP1R11  
PRCP  
PRKAR2A  
PRRT2  
PTCHD1  
PTPRA  
RAB14  
RALGPS2  
RARB  
RERE  
RFX7  
RIC8B  
RIMS2  
RIMS4

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RNF20  
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ROBO1  
RSBN1  
RUNX1T1  
SAMD8  
SAR1A  
SCARB1  
SCN3B  
SEC22A  
SEL1L3  
SETD5  
SF1  
SGMS1  
SIX3  
SLC16A2  
SLC24A2  
SLC25A15  
SLC25A53  
SLC38A1  
SLC39A14  
SLC8A1  
SMG7  
SNX30  
SORL1  
SORT1  
SOX13  
SPATA2  
SPATS2  
SPIN3  
SSBP2  
STAC2  
STRBP  
SYNM  
TANC2  
TBC1D20  
TCF12  
TDRKH  
TEAD1  
THRA  
TJP1  
TMEM120B  
TMOD2  
TOM1L2  
TOX3  
TPD52  
TRAF6  
TRIM44  
TRIM5  
TRIM67  
TSN  
UHMK1

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		URM1 USH1C USP3 USP3 VIPAS39 WWC2 XKR4 XYLT1 ZBTB2 ZBTB20 ZC3H11A ZCCHC3 ZNF367 ZNF385A ZNF423 ZNF512B ZNF532 ZNF652 ZNF704 ZNRF2 ZNRF3
hsa-mir-185-5p	↓	ABCG4 ACTN4 ANKRD34A ATP6V1F ATP8B1 BEND3 BICD1 BSN CAPZB CBX5 CCND2 CORO2B CTSK ELOVL4 GPR12 IGF2R IKZF4 KIF3C KLC1 LPCAT3 LSAMP MAT2A MSI1 MYO18A NCOA2 PAX2 PBX2 PCDHA5 PITPNA PLA2G2F PRKAR2A

		RERE RIC8B RNF20 SAR1A SCARB1 SIX3 SLC16A2 SLC24A2 SLC25A15 SLC25A53 SNX30 SORL1 SOX13 SPATA2 TEAD1 TMOD2 TOX3 TRIM44 VIPAS39 XYLT1 ZNF704
hsa-mir-320a-3p	↓	ABHD13 ACSS1 ACVR2B ADAM10 AGFG1 AGPS AIF1L AK4 AKT3 ALKBH5 ANKFY1 ANKH ANKRD13A ANKRD52 AP3M1 ARFGEF2 ARFIP1 ARL5A ARL8B ARMC1 ARMCX2 ARPP19 ATF7IP2 ATG14 ATL3 ATP11A ATRX AZIN1 B3GALNT2 BANP BLCAP

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BMI1  
BMPR1A  
BOD1L1  
BRWD3  
BVES  
C21orf91  
CACNA1E  
CACNG2  
CALN1  
CAPRIN1  
CCR7  
CD274  
CDH2  
CDH20  
CDK13  
CDK6  
CELSR3  
CFL2  
CHGA  
CHIC1  
CHSY3  
CISD1  
CISD2  
CKAP5  
CLCN5  
CNKSR2  
CNOT7  
CNPY4  
COMMD3-BMI1  
COPS2  
CPD  
CREB3L2  
CREBRF  
CRKL  
CTDNEP1  
CYLD  
CYTH1  
DAB2  
DAG1  
DAZAP1  
DBN1  
DCBLD2  
DCC  
DCP1A  
DDX42  
DENND5B  
DESI2  
DHDDS  
DHX15  
DLGAP4  
DLK1  
DLX1

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DMD  
DNAJA2  
DNAJC3  
DNER  
DOK6  
DPY30  
DR1  
DTNA  
E2F1  
EFS  
EGR3  
EIF3J  
ELL2  
ELOVL6  
EMB  
EMC7  
EMILIN2  
ENAH  
ENPEP  
ENTPD4  
EOGT  
ESRRG  
ETFA  
ETV1  
EXO1  
EXOC5  
EYA3  
FAM117B  
FAM135B  
FAM160B1  
FAM199X  
FANCF  
FBXO28  
FBXO42  
FKBP5  
FLRT3  
FOXM1  
FOXQ1  
FUS  
GABPB2  
GLIS3  
GMCL1  
GNAI1  
GNS  
GOLGA1  
GOLGA3  
GPBP1  
GRIN2A  
GSPT1  
GTPBP2  
GXYLT1  
HECA

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HECTD2  
HELZ  
HERPUD1  
HEY1  
HIC2  
HIVEP2  
HLCS  
HLTF  
HNRNPF  
HOXA10  
HOXB4  
HSPA4  
HSPH1  
HUNK  
IDE  
IGF2BP3  
ING5  
INO80D  
INVS  
IPO5  
IPO7  
IRF6  
KCNAB1  
KCNS3  
KCTD9  
KIN  
KITLG  
KLHDC9  
KLHL14  
KLHL36  
KRI1  
LHFPL3  
LMO3  
LOXL3  
LPIN3  
LRP6  
LRRC4  
MAK16  
MAP1LC3B  
MAP7  
MAPK1  
MAPK8IP3  
MBLAC2  
MED21  
MEX3B  
MIER1  
MIER3  
MITF  
MLLT3  
MMP16  
MN1  
MSANTD4

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MSI2  
MTDH  
MTF2  
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MXI1  
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MYL12A  
MYRF  
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NAA40  
NABP1  
NAP1L5  
NCAPD3  
NCDN  
NECAP2  
NEGR1  
NFIA  
NKX2-4  
NR2C2  
NR3C1  
NRK  
NRN1  
NRP1  
NUFIP2  
NXT2  
ONECUT2  
OTUD7B  
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PBX1  
PBX3  
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PCDHA5  
PCDHA6  
PCDHA7  
PCDHA8  
PCDHA9  
PCDHAC1  
PCDHAC2  
PCGF5  
PCSK1  
PCSK6  
PCSK7  
PDCD4

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PDS5A  
PDZD8  
PFKM  
PHC1  
PHF1  
PI15  
PIK3CA  
PIK3R1  
PLEKHA5  
PLK3  
PLXDC2  
POLR1C  
PPCS  
PPM1H  
PPP1R16B  
PPP1R3E  
PPP2R2C  
PRKAG2  
PRPS1  
PSMF1  
PTEN  
PTPRB  
QSOX2  
RAB11A  
RAB18  
RAB3GAP2  
RAD51  
RAI2  
RANBP2  
RAP1A  
RAPGEFL1  
RASA1  
RASSF8  
RBM24  
RBMS3  
RCN2  
RELT  
RIT1  
RMDN3  
RNF185  
RPL15  
RRP1B  
RUNX1T1  
SASH1  
SATB2  
SCAI  
SCN1A  
SDHD  
SDK1  
SEC63  
SEMA3A  
SERINC3

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SESN3  
SESTD1  
SETD6  
SF3B3  
SGCB  
SH2B3  
SIN3A  
SLC10A3  
SLC10A7  
SLC28A3  
SLC5A3  
SLC6A8  
SMARCC1  
SMARCD2  
SMG7  
SNTB2  
SOBP  
SORCS1  
SOX4  
SPOPL  
SREK1  
SREK1IP1  
SRP19  
ST3GAL1  
STAG2  
STARD4  
STAT4  
STIM2  
STK24  
SYNGR2  
TANC1  
TANC2  
TBC1D15  
TBX18  
TBX4  
TFAP2B  
TFCP2L1  
THSD7A  
THUMPD3  
TIFAB  
TIMM8B  
TIPARP  
TLL2  
TMEM106B  
TMEM108  
TMEM167B  
TMEM255A  
TOR1AIP2  
TPD52  
TPD52L2  
TPM3  
TRABD2B

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TRIAP1
TSC1
TSC22D4
TSHZ3
TUSC3
UBE2Z
ULK1
UNKL
USP44
USP46
VDAC1
VLDLR
VPS36
VPS37B
WDR1
WLS
WNT9B
WWC2
XIAP
XPO1
YIPF6
YOD1
YWHAH
ZBTB10
ZC3H12C
ZC3H7B
ZDHHC21
ZDHHC3
ZFP91
ZIC3
ZNF281
ZNF516
ZNF652
ZSWIM6

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**Table S2. Summary of the significant molecular KEGG pathways related to cellular processes (A, B, C, D) and diseases (F, G) modulated by the selected miRNAs in CPP.**

**A) Signal transduction**

<b>KEGG pathway</b>	<b>Adjusted p-value</b>	<b>No. of genes</b>
PI3K-Akt signaling pathway	8.31E-023	54
MAPK signaling pathway	1.16E-022	47
Rap1 signaling pathway	1.02E-017	38
Ras signaling pathway	4.28E-015	35
Wnt signaling pathway	5.72E-012	25
Hippo signaling pathway	5.72E-012	26
Calcium signaling pathway	5.13E-010	25
FoxO signaling pathway	1.06E-009	22
HIF-1 signaling pathway	2.15E-009	19

Jak-STAT signaling pathway	1.62E-007	20
ErbB signaling pathway	1.58E-006	14
Hedgehog signaling pathway	3.03E-005	10
mTOR signaling pathway	1.08E-004	10
TGF-beta signaling pathway	1.94E-004	11
Phosphatidylinositol signaling system	1.94E-004	11
TNF signaling pathway	4.71E-004	12
Notch signaling pathway	4.24E-003	7
VEGF signaling pathway	4.80E-002	6

#### B) Nervous system

KEGG pathway	Adjusted p-value	No. of genes
Neurotrophin signaling pathway	3.05E-011	23
Dopaminergic synapse	7.38E-010	22
Cholinergic synapse	1.48E-009	20
Retrograde endocannabinoid signaling	9.92E-008	17
Long-term potentiation	1.42E-006	13
Glutamatergic synapse	1.52E-006	16
Long-term depression	3.39E-006	12
Serotonergic synapse	3.38E-005	14
GABAergic synapse	3.39E-004	11

#### C) Substance Dependence

KEGG pathway	Adjusted p-value	No. of genes
Morphine addiction	1.62164E-07	16
Amphetamine addiction	1.62164E-07	14
Cocaine addiction	1.13298E-05	10
Alcoholism	0.000267754	16
Nicotine addiction	0.00935854	6

#### D) Endocrine System

KEGG pathway	Adjusted p-value	No. of genes
Melanogenesis	3.78E-10	20
Insulin signaling pathway	3.65E-08	20
Thyroid hormone signaling pathway	4.26E-07	17
Estrogen signaling pathway	1.32E-06	15
Prolactin signaling pathway	2.08E-06	13
Insulin secretion	8.38E-06	13
Progesterone-mediated oocyte maturation	1.13E-05	13
GnRH signaling pathway	1.96E-05	13
Adipocytokine signaling pathway	0.000358	10

#### E) Immune system

KEGG pathway	Adjusted p-value	No. of genes
Fc gamma R-mediated phagocytosis	1.59131E-05	13
T cell receptor signaling pathway	4.56757E-05	13
Leukocyte transendothelial migration	5.85734E-05	14
Fc epsilon RI signaling pathway	0.000267754	10
Chemokine signaling pathway	0.000358264	16
B cell receptor signaling pathway	0.000358264	10
RIG-I-like receptor signaling pathway	0.0301527	7

#### F) Cancer

KEGG pathway	Adjusted p-value	No. of genes
Pathways in cancer	1.63825E-25	56
Transcriptional misregulation in cancer	5.34E-019	37
Proteoglycans in cancer	2.07E-017	38
MicroRNAs in cancer	4.29E-014	39
Melanoma	1.62E-011	19
Chronic myeloid leukemia	2.37E-011	19
Prostate cancer	7.56E-011	20
Pancreatic cancer	2.85E-010	17
Glioma	3.50E-009	16
Small cell lung cancer	1.08E-008	17
Colorectal cancer	5.11E-008	14
Bladder cancer	4.26E-007	11
Non-small cell lung cancer	1.62E-006	12
Renal carcinoma	2.57E-006	12
Viral carcinogenesis	7.62E-006	20
Acute myeloid leukemia	7.19E-005	10
Basal cell carcinoma	1.94E-004	9
Thyroid cancer	2.68E-004	8
Endometrial cancer	7.47E-004	7

#### G) Viral Infectious disease

KEGG pathway	Adjusted p-value	No. of genes
HTLV-1 infection	5.30E-015	37
Hepatitis B	6.10E-010	23
Amoebiasis	1.61E-007	17
Chagas disease (American trypanosomiasis)	3.05E-006	15
Epstein-Barr virus infection	5.71E-006	20
Measles	1.62E-004	14
Influenza A	1.94E-004	16
Toxoplasmosis	7.98E-004	12
Herpes simplex infection	3.35E-003	14
Hepatitis C	9.11E-003	11

**Table S3. Summary of the significant molecular KEGG pathways related to cellular processes (A, B, C) and diseases (D, E) modulated by the selected miRNAs in CSP.**

**A) Signal transduction**

<b>KEGG pathway</b>	<b>Adjusted p-value</b>	<b>No. of genes</b>
ErbB signaling pathway	3.65E-05	9
mTOR signaling pathway	3.65E-05	8
Ras signaling pathway	0.000139122	12
MAPK signaling pathway	0.000448852	12
PI3K-Akt signaling pathway	0.000448852	14
Rap1 signaling pathway	0.000448852	11
FoxO signaling pathway	0.000459	9
VEGF signaling pathway	0.001262	6
Hippo signaling pathway	0.003356	8
TNF signaling pathway	0.003411	7
Calcium signaling pathway	0.007831	8
Phosphatidylinositol signaling system	0.02914	5
Wnt signaling pathway	0.0431235	6

**B) Endocrine system**

<b>KEGG pathway</b>	<b>Adjusted p-value</b>	<b>No. of genes</b>
Melanogenesis	4.49E-004	8
Insulin signaling pathway	4.84E-004	9
Thyroid hormone signaling pathway	9.48E-004	8
Estrogen signaling pathway	1.75E-003	7
Prolactin signaling pathway	2.79E-003	6
Progesterone-mediated oocyte maturation	6.05E-003	6

**C) Immune system**

<b>KEGG pathway</b>	<b>Adjusted p-value</b>	<b>No. of genes</b>
T cell receptor signaling pathway	4.49E-004	8
Toll-like receptor signaling pathway	5.26E-004	8
Leukocyte transendothelial migration	1.14E-003	8
Fc gamma R-mediated phagocytosis	1.26E-003	7
Chemokine signaling pathway	2.90E-003	9
Fc epsilon RI signaling pathway	1.56E-002	5
B cell receptor signaling pathway	1.83E-002	5

**D) Viral infectious disease**

<b>KEGG pathway</b>	<b>Adjusted p-value</b>	<b>No. of genes</b>
Hepatitis B	3.65035E-05	11



HTLV-1 infection	0.000113102	13
Chagas disease (American trypanosomiasis)	0.000113102	9
Toxoplasmosis	0.000212993	9
Influenza A	0.000477164	10
Hepatitis C	0.00205935	8
Epstein-Barr virus infection	0.00432372	9
Measles	0.00845821	7

#### E) Cancer

KEGG pathway	Adjusted p-value	No. of genes
Pathway in cancer	2.22973E-09	22
Transcriptional misregulation in cancer	9.45E-006	13
Small cell lung cancer	3.65E-005	9
Renal cell carcinoma	3.65E-005	8
Pancreatic cancer	4.24E-005	8
Glioma	5.49E-005	8
Melanoma	7.04E-005	8
MicroRNAs in cancer	1.39E-004	14
Proteoglycans in cancer	1.39E-004	12
Non-small cell lung cancer	1.60E-004	7
Chronic myeloid leukemia	4.59E-004	7
Viral carcinogenesis	1.26E-003	10
Prostate cancer	1.26E-003	7
Colorectal cancer	1.26E-003	6
Endometrial cancer	4.02E-003	5
Acute myeloid leukemia	7.83E-003	5