

Supplementary table. 1. List of the common genes of herbs of Chongmyunggongjin-dan and Alzheimer's disease gene sets.

419 Common Genes of *A. gigas* and Alzheimer's disease

ABAT, ABCB1, ABCC2, ABCG2, ACACB, ACE, ACHE, ACLY, ACO2, ADH1A, ADH5, ADIPOQ, ADRB3, AHR, AK8, AKR1B1, AKT1, ALB, ALOX5, ALPL, AMBP, ANG, ANXA5, APOA1, APOB, APOE, AR, ARG1, ARG2, ASL, ASS1, ATF4, ATP12A, ATP1B1, ATP2B1, AVP, AVPI1, AZIN2, BACE1, BCHE, BCL2, BCL2L1, BDNF, BECN1, BIRC5, BMP2, BMP3, C3, C5, C5AR1, CA1, CA2, CAD, CALCA, CARM1, CASP3, CASP7, CASP8, CASP9, CAT, CCK, CCL11, CCL2, CCL5, CCND1, CCR3, CCS, CD14, CD19, CD1A, CD28, CD36, CD4, CD40LG, CD44, CD46, CD55, CD63, CD68, CD79A, CD80, CDK1, CDK13, CDK2, CDK2AP1, CDK4, CDK6, CDKN1A, CDKN1B, CDKN2A, CEBPA, CHEK1, CHEK2, CHUK, CKMT1B, CP, CPS1, CPT1A, CPVL, CRH, CRP, CSF2, CSTB, CTNNB1, CTSB, CTSD, CXCL8, CYP1A1, CYP1A2, CYP2A6, CYP2B6, CYP2C19, CYP2C9, CYP2D6, CYP2E1, CYP2J2, CYP3A4, CYSLTR2, DBH, DCLRE1A, DHFR, DIABLO, DKK1, DLD, DNAJB6, DNAJB9, DRD2, EDN1, EEF1A2, EGF, EGFR, EIF2AK1, ELANE, ERBB2, ERCC4, ERVW-1, ESR2, F2, FASN, FCGR2A, FEN1, FGF21, FGFR1, FH, FHIT, FKBP2, FLNB, FOS, FOXO1, FPR1, FURIN, FXN, G6PD, GAA, GABPA, GAD1, GAD2, GAPDH, GAST, GATM, GCG, GFAP, GH1, GHRH, GHRL, GLB1, GLP1R, GLS, GLUD1, GLUL, GNPNAT1, GOT1L1, GPT, GRIN2B, GRM6, GSR, GSTM1, GSTP1, HAVCR2, HBA1, HCRT, HDC, HIF1A, HK1, HLA-B, HLA-DRB1, HMGB1, HMGCR, HMOX1, HPRT1, HRG, HRH1, HRH2, HRH3, HRH4, HSP90B1, HSPA5, HTR2A, HTR2C, HTT, IAPP, ICAM1, IFNA1, IFNLR1, IGF1, IL10, IL13, IL17A, IL1B, IL2, IL3, IL4, IL6, IL9, ILK, INS, INSR, IRS1, ISG20, ISYNA1, ITGAM, ITPR3, IVNS1ABP, JAK2, JUN, JUND, KDR, KEAP1, KLK3, KNG1, LAT51, LDHA, LDHB, LEP, LPL, LPO, LYZ, MAOA, MAP4K4, MAPK1, MAPK14, MAPK8, MARK2, MB, MBP, MDH1, MDH2, ME2, MIPEP, MITE, MKI67, MMP13, MMP9, MPO, MRC1, MST1, MT-CYB, MTOR, MTR, MTRNR2L8, MYC, MYD88, MYLK, NAALADL1, NFATC1, NFE2L2, NFKB1, NGB, NGF, NIT2, NLRP3, NME1, NOLC1, NOS1, NOS2, NOS3, NPM1, NPY, NQO1, NR1H4, NTS, OAT, OCLN, ODC1, OPRD1, OPRM1, OTC, OXSR1, P4HB, PADI3, PADI4, PARP1, PCK1, PCNA, PDE3B, PDK4, PDX1, PDYN, PFKL, PIK3C3, PIK3CA, PIKFYVE, PIN1, PKM, PLA2G12A, PLAT, PLD1, PLD2, PLG, PMEL, PNLLIP, POMC, PON1, PPARA, PPARG, PPARGC1A, PRG2, PRKAA2, PRKCQ, PRL, PRMT5, PRNP, PROKR1, PRPF19, PRPF4B, PTGER2, PTGES, PTGS1, PTGS2, PYGB, RAD1, RAD18, RB1, RBMS3, RELA, REN, RETN, RPS6KB1, RUNX2, SAMHD1, SCN2A, SCT, SELE, SELP, SETD2, SGMS1, SHBG, SIRT1, SLC12A2, SLC12A9, SLC13A3, SLC18A3, SLC1A1, SLC1A5, SLC22A1, SLC22A2, SLC22A5, SLC22A6, SLC22A8, SLC25A11, SLC25A13, SLC2A1, SLC2A2, SLC2A4, SLC3A2, SLC5A1, SLC5A2, SLC6A3, SLC6A4, SLC7A1, SLC02B1, SMAD2, SOAT2, SOD1, SOD2, SPANXC, SPG7, SREBF1, SRM, SRPK1, SRSF1, SST, STAT3, STK24, STK3, STK39, SUCNR1, SYT1, TAC1, TBC1D9, TET1, TF, TH, THBS1, TIPARP, TJP1, TJP2, TLR4, TMPRSS15, TNF, TNK1, TP53, TREM1, TRH, TRPM1, TSLP, TYR, UGT1A1, UGT1A8, USP9X, VCAM1, VEGFA, VIP, VWF, WNK1, WNT3A, XDH, XRCC1, ZMYND8

396 Common Genes of *C.officinalis* and Alzheimer's disease

ABC1, ABCB1, ABCC2, ABCD2, ABCG1, ABCG2, ABCG5, ABCG8, ACACB, ACAT1, ACE, ACE2, ACHE, ACSBG1, ADAM8, ADH1A, ADH6, ADIPOQ, ADORA2A, AGER, AHR, AIM2, AKR1B1, AKR1B10, AKT1, ALB, ALOX12, ALOX15, ALOX5, ALPK2, ALPL, AMBP, ANG, ANXA5, APAF1, APOA1, APOB, APOE, AR, ARG1, ARRB2, ARTN, ATF4, ATF6, ATG13, ATG5, ATG7, ATP2B1, AVP, BACE1, BAX, BCHE, BCL2, BCL2A1, BCL2L1, BDNF, BECN1, BGLAP, BIRC5, BMP2, BMP3, BNIP3, CACNA1E, CALCR, CAMK2G, CAPN1, CASP1, CASP3, CASP7, CASP8, CASP9, CAT, CBR1, CCK, CCL2, CCL3, CCL4, CCL5, CCL7, CCNB1, CCND1, CCS, CD14, CD248, CD36, CD4, CD40LG, CDC25C, CDH1, CDH2, CDK1, CDK4, CDK6,

CDKN1A, CEBPA, CETP, CHAT, CHMP2B, CHUK, CKMT1B, CLDN2, CNP, COL1A1, COMT, COX4I1, COX7A1, CRP, CSF1, CSF3, CTNNB1, CTRL, CTSK, CXCL10, CXCL12, CXCL8, CXCR4, CYBB, CYP1A1, CYP1A2, CYP2B6, CYP2C9, CYP2D6, CYP2E1, CYP3A4, DCTN4, DDAH1, DDAH2, DDC, DHFR, DKK1, DLD, DLG4, DMD, DNTT, DPP4, DYNC1H1, EGF, EGFR, EIF2AK2, EIF2AK3, ELANE, ESR1, ESR2, F2, F3, FAAH, FAM20C, FASLG, FASN, FDFT1, FGF21, FGFR1, FNDC5, FOS, FOXO1, FOXO3, FPR1, FST, FZD10, GAA, GABPA, GALNT12, GAP43, GATA3, GCG, GCK, GCLC, GCLM, GDF5, GFAP, GH1, GLP1R, GNAS, GOT1L1, GPBAR1, GPER1, GPT, GPX1, GRIK4, GSR, GSTO1, GUSB, HAS2, HDC, HIF1A, HMGB1, HMGCR, HMGCS1, HMOX1, HP, HSP90AA1, HSPA5, HSPB1, HYAL1, HYAL2, IBSP, ICAM1, IFNG, IFNLR1, IL10, IL13, IL17A, IL1B, IL2, IL23A, IL4, IL6, INS, INSR, IRS1, ISG20, ISYNA1, ITGAM, ITPR3, JUN, JUND, KAT8, KEAP1, LATS1, LCAT, LCK, LCMT1, LDHB, LDLR, LEF1, LEP, LGALS3, LGALS4, LIN28B, LIPA, LIPC, LIPE, LPA, LPL, LY96, LYZ, MAP1LC3A, MAP2K4, MAP3K7, MAPK1, MAPK10, MAPK11, MAPK14, MAPK3, MAPK8, MAPK9, MAPT, MB, MC1R, MCL1, MITF, MKI67, MLN, MMP1, MMP13, MMP2, MMP3, MMP9, MPO, MSTN, MT-ND2, MTOR, MYC, MYLK, MYO9A, NFATC1, NFATC2, NFE2L2, NFKB1, NFKBIA, NLRP1, NLRP3, NME1, NOS2, NOS3, NOTCH1, NOX4, NPC1, NPC1L1, NPPA, NQO1, NR1H2, NR1H3, NR1H4, NR1I2, NR3C1, NTRK2, ODC1, PARP1, PAX6, PCK1, PCNA, PCSK9, PDK2, PDK4, PDPK1, PDX1, PFKFB3, PGR, PIK3AP1, PIK3C3, PIK3CA, PLA2G1B, PLAU, PLBD2, PNLP, POMC, POU5F1, PPARA, PPARD, PPARG, PPIF, PPME1, PPP2CA, PREP, PRKAA2, PRKCE, PRKCQ, PRPF6, PTEN, PTGS1, PTGS2, PTK2, PTPN1, PTPRF, PYCARD, PYGB, RAC2, RELA, RETN, ROCK1, RPS6KB1, RUNX2, RYR2, SCD5, SELE, SERPINB1, SETD2, SIRT1, SLC22A6, SLC22A8, SLC2A2, SLC2A4, SLC6A3, SMAD5, SMAD7, SOAT2, SOD1, SOD2, SORD, SPI, SPP1, SREBF1, SREBF2, STAT1, STAT3, STK3, SYK, SYT1, TCF4, TF, TFEB, TGFB1, TGIF1, TGM1, TH, TIMP1, TIMP2, TIPARP, TK1, TLR2, TLR4, TNF, TNFRSF11B, TNFSF11, TNK1, TOP2B, TP53, TSC1, TTBK1, TUFM, TXN, TYR, TYRP1, UBAC1, UCP1, VCAM1, VEGFA, VIM, VPS4A, WEE1, WNT10B, XDH, YAP1, YARS2

236 Common Genes of *P.tenuifolia* and Alzheimer's disease

ABCB1, ABCC2, ABI1, ACACB, ACE, ACE2, ACHE, ADA, ADH1A, ADH5, ADIPOQ, AGTR1, AIMP2, AKR1B1, AKT1, ALB, ALOX5, ALPL, AMBP, ANG, ANO2, ANXA5, APMAP, APOA1, ARTN, ATF1, ATF2, ATP2B1, BACE1, BAK1, BCHE, BCL2, BCL2L1, BDNF, BECN1, BMP2, BMP3, CA1, CACNA1E, CALR, CAMKK2, CASP1, CASP3, CASP9, CAT, CAV1, CCK, CCL2, CCNB1, CCND1, CCS, CD36, CD4, CD40LG, CD79A, CDK16, CDK2, CDK4, CHAT, CHL1, CLYBL, CREBBP, CRH, CRP, CRTC1, CS, CSF2, CTNNB1, CTRL, CXCL8, CYP1A2, CYP2A6, CYP2C19, CYP2C8, CYP2C9, CYP2D6, CYP2E1, DAPK2, DCTN4, DEGS1, EGF, EGFR, EIF2AK3, F2, FASN, FH, FIS1, FOSB, GAA, GAP43, GAPDH, GAST, GCG, GCK, GCLM, GJA1, GLB1, GLIPR1, GLO1, GOT1L1, GPT, GRB2, GRM1, GRM6, GSR, GUSB, HIF1A, HK1, HMGB1, HMGCR, HMOX1, HSP90B1, HTT, IAH1, ICAM1, IFNLR1, IL10, IL17A, IL18, IL1B, IL2, IL4, IL6, INS, INSR, ISYNA1, JUN, KDM1A, KEAP1, LCAT, LDHB, LEP, LIPA, LIPE, LPL, LRRC7, LYZ, MAP1LC3A, MAP2K1, MAPK1, MAPK14, MAPK8, MAPK9, ME2, MLN, MMP1, MMP2, MMP3, MMP9, MPO, MRC1, MTOR, MX1, MYD88, NFE2L2, NFKB1, NGF, NIM1K, NLRP3, NME1, NOS2, NOS3, NQO1, NR3C1, NR3C2, NT5C2, NT5C3A, NTRK2, PAPSS1, PARP1, PCNA, PDE3B, PIK3C3, PIK3CA, PIKFYVE, PKM, PLA2G12A, PLA2G7, PLD5, PNLP, POLR3C, POMC, PON1, PON2, PON3, PPARA, PPARG, PRKAA2, PRNP, PRTN3, PTEN, PTGS1, PTGS2, PTH, PTK2, RELA, RGN, RHOA, ROCK2, RPS2, RUNX2, SERPINF1, SIRT1, SLC12A9, SLC22A6, SLC2A1, SLC2A2, SLC2A4, SLC38A5, SLC5A1, SNCA, SOD1, SPP1, SST, STAT3, STK11, SUGCT, SUGT1, TAC1, TF, TH, TIPARP, TLR4, TNF, TNK1, TPM3, TXN, TXNIP, TXNRD3, TYR, VEGFA, VIP, XDH, XIAP, ZMYND8, ZNF346

161 Common Genes of *A.gramineus* and Alzheimer's disease

ABCB1, ABCG1, ABL1, ACHE, AIF1, AKT1, ALB, ALOX15, ALOX5, ALPL, ANG, ANXA5, ARC, ARTN, ATG16L1, ATP2B1, BCHE, BCL2, BCL2L1, BDNF, BECN1, BIRC5, BMI1, BMP3, BTK, CA1, CAPN1, CASP3, CASP7, CASP9, CAT, CCK, CCL2, CCND1, CCR2, CCS, CD40LG, CDC25A, CDH1, CDH2, CLDN5, CNP, CNTF, COMT, CPT1A, CTNNB1, CXCL8, CYP1A1, CYP1A2, CYP3A4, CYP51A1, DCTN4, DDC, DNTT, ELANE, ENO2, EPHB2, ERN1, FMR1, FOS, GAA, GABPA, GAD2, GCLC, GDNF, GFAP, GOT1L1, GPT, GRIA1, GRIA2, GRIN2A, GRIN2B, GRM2, GSDMD, HGF, HMGCR, HMOX1, HNRNPA2B1, HNRNPH1, HSPA5, HSPA8, ICAM1, IL10, IL18, IL2, IL4, IL6, INS, JAK2, JUN, JUND, KCNMA1, LDHB, LIPE, LMNB1, LYZ, MAOB, MAP1A, MAP1LC3A, MAP2K7, MAP3K5, MAPK14, MAPK8, MEF2D, MME, MPO, MTOR, MYC, NFATC1, NFE2L2, NFKB1, NFKBIA, NFKBIB, NGF, NOS3, NR3C1, NTRK2, PCNA, PDK1, PDK4, PIK3C3, PIK3CA, PINK1, POU2F1, PPARA, PPARG, PRKAA2, PRKACA, PSEN1, PTGS1, PTGS2, PTPN1, PYCARD, RELA, RGS1, ROCK2, RPP38, S100B, SCN2A, SLC1A1, SLC1A2, SLC22A1, SNCA, STT3A, SYN1, SYP, TH, TLR4, TMC1, TNF, TNFRSF11A, TNFSF11, TP53, TRAF2, TRPM1, TYR, VEGFA, WNT7A, XAF1, XBP1, XDH

160 Common Genes of *Cervi Parvum cornu* and Alzheimer's disease

ABAT, ABCB1, ACHE, ADA, ADIPOQ, ACACB, AKT1, ALB, ALDH5A1, ALDOA, ALPL, AMBP, ANG, APOB, APOBEC3A, APOBEC3F, APOBEC3G, APOBEC3H, AR, AVP, BCHE, BCL2, BDNF, BGLAP, BMF, BRCA1, CAD, CASP3, CAT, CCND1, CCS, CD4, CD40LG, CD79A, CDH1, CDKN1A, CGA, CGB5, CKMT1B, CNP, CRH, CRP, CTNNB1, CTSD, CXCL8, CYP17A1, CYP19A1, CYP3A4, DAG1, DBH, DES, DHRS9, DLL1, DPYD, DPYS, DUT, ECHDC2, EGF, EGFR, ELAVL1, EPO, ERBB2, ESR1, ESR2, FOS, FOXO1, FSHR, FST, GAPDH, GARI, GH1, GHRH, GHRL, GNRH1, GNRHR, GOT1L1, GPT, GRM6, HSD3B1, HSP90B1, IFNLR1, IGF1, IGF2, IGFBP1, IGFBP3, IL10, IL6, INS, ITGAM, KCNA3, KISS1, KISS1R, KLK3, LEP, LHCGR, LYZ, MAPK14, MKI67, MTHFR, NFE2L2, NOS3, NR3C1, NR3C2, ODC1, OGG1, OTC, OXTR, P2RY2, P2RY4, P2RY6, PAEP, PAPSS1, PARP1, PCNA, PDE3B, PGR, PGRMC1, PIK3CA, PLAU, PNLIPI, POLB, POLR3C, POMC, PPIB, PRKCQ, PRL, PTEN, PTGS1, PTGS2, PTH, RBMS3, REN, RNASE2, RPAIN, SCGB1A1, SERPINA6, SHBG, SLC28A1, SLC29A1, SLC29A2, STAR, STAT3, STX8, TDG, TF, TK1, TLR7, TLR8
TNF, TP53, TRH, TYR, U2AF2, UMPS, UPP1, VEGFA, VIM, XDH, XRCC1, ZFP36

143 Common Genes of *P.cocos* Wolf and Alzheimer's disease

ABCB1, ACACB, ACHE, ADIPOQ, AGPAT4, AGT, AIM2, AKT1, ALB, ALDH2, ALPL, ANXA5, ATF4, ATP12A, AXL, BAX, BCL2, BCL2L1, BDNF, BECN1, CAPN1, CASP14, CASP3, CASP8, CASP9, CAT, CAV1, CCK, CCS, CD40LG, CDC20, CDH1, CDK2, CDK4, CDK6, CHEK2, CHUK, CTNNB1, CTSD, CXCL8, CYP2E1, DAPK1, DLG4, DNASE1, DNTT, EGFR, ELAVL1, EPHA2, F2R, FASN, FDPS, FGFR3, FOXO1, GABPA, GAD1, GAD2, GAPDH, GAS6, GGPS1, GOT1L1, GPX1, GPX4, GRIA1, GRIN2A, GRIN2B, GRIN2D, HMOX1, HTR3A, IGF1, IL10, IL4, IL6, INS, ISYNA1, JAK2, JUND, KEAP1, KL, LEP, LMNA, MAP1LC3A, MAPK3, MAPK8, MDM2, MMP13, MMP2, MMP3, MMP7, MTOR, NFE2L2, NME1, NOS2, NOS3, NPPB, NR1H4, NR3C1, NTRK2, PARP1, PDK1, PDX1, PIK3CA, PIKFYVE, PKM, PKN1, PLA2G12A, PLBD2, POLB, PPARA, PPARG, PPP1R13B, PRKAA2, PTEN, PTGS2, PTK2, RB1, REN, RYR2, SETD2, SIRT3, SLC10A2, SLC2A1, SLC2A4, SLC7A1, SLC7A11, SMAD3, SNAI1, SOAT2, SREBF1, SREBF2, TGFB1, TGFB1R, TIPARP, TNF, TNFRSF10B, TNFRSF11A, TNFSF11, TOP1, TOP2B, TP53, TPH1, VEGFA, WNT1, WNT3A

103 Common Genes of *Moschus* and Alzheimer's disease

ABCA1, ABCG1, ABCG5, ABCG8, ACACB, ACAT1, AKT1, ALB, ALPL, ANXA5, APOA1, APOA2, APOA5, APOB, APOC2, APOC3, APOD, APOE, AR, CALCA, CALCRL, CASP3, CASP9, CAT, CAV1, CCK, CCL2, CCS, CD36, CD4, CD40LG, CETP, CKMT1B, COG2, CRP, DHCR7, DHRS9, DNTT, EGFR, EIF4A1, ESR2, F7, FASN, FLNC, G6PD, GCG, GOT1L1,

GPBAR1, GPIHBP1, GPT, HMGCR, HPSE, HSP90B1, ICAM1, ICAM5, IGF1, IL10, IL6, INS, JPH3, LDLR, LDLRAP1, LIPA, LIPC, LPA, MAP1LC3A, MTOR, NOS3, NPC1L1, NPC2, NR1H2, NR1H3, NR1H4, NR3C1, PGR, PIK3CA, PKD1, PLAT, PLBD2, PLTP, POR, PPARA, PPARG, PPP1R12A, PRL, PTGS2, PTH, SCARB1, SELE, SHBG, SLC3A2, SOAT1, SOAT2, SREBF2, TF, TGFBR1, TLR4, TNF, UGT1A1, UGT1A8, UGT1A9, VCAM1, VWF
