

Supplementary Data 1: CYP87A protein sequences from various plants used in construction of phylogenetic analysis.

> *Solanum lycopersicum* (SICYP87A21)

MISVGMSIGAFILIIIIHWVYNWRNPRCNGKLPFGSMGWPLLGETIQFFTPNTTLDIAPF
VKERMKRYGPIFRTSVVGRPVIIVSTDPDLNYFIFQQEGQSFQSWYPDTFTEIFGRQNV
GSLHGFMYKYLKNMVLNLFGSESLKMLPEVEEVAKNKLKRWSGQTSVEMKEATAN
MIFDLTAKKLISYDSETSSENLRESFVAFIQGLISFPIDIPGTAYHKCLQGRKKAMKMLKT
MLEERRAKPRKEGTDFFDYVLEELQKNDIILTEAIALDLMFVLLFASFETTSLAITLATKFL
HDHPLALKELTEEHEAIIRSRENPAAGLTWKEYKSMKFTFQVINETVRLANIVPAIFRKT
LDINFKGYTIPAGWAVMVCPPAVHLNPAKYQDPLDFNPWRWEGVEINGATRNFMAFG
GGMRFVCGTDFTKVQMAVFLHSLVTKYRWQTIGGGNTVVRTPGLQFPNGYHVRRISEKD
EKIL

> *Digitalis purpurea* (DpCYP87A106)

MSLVAISIGAILVITNCVFKWRNRSLSSGGILPPGSFGWPLIGETLHFFTPNTSFDVTPF
VKDRMKRYGPIFKTSLVGVPVIVSTDAELNFIQFQQEGQTFQSWYPSTFTEIFGRENLS
TLHGFMYKYFKNMVLGLFGPELTKMISEVENTSNINLKRWSANGTVELKDAIAEMIFE
LTAKKLISYELEKSPYNLRDNFVAFIDGLISFPLNIPGTAYYKCLQGRKNAIKMLRDMLHE
RREKPRETQTDFFDYVLEELQKQDTIITETLALDLMFVLLFASHETASIALTLAMKFLVDH
PLVLDKLTEEHDEIIMKREDPNSGLTWNEYKSMKFTFQFINETRLANIAPLIFRKALTE
EFKGYTIPAGWAVMVCLPAVHLDPTKYKNPLEFNPWRWEGVDTSVGSKTFMAFGGG
MRLCIGADFTKVQMAVFLHCLVTKYKWKTIKGGDIVRCPGLKFPNGFHVQMSEREAN
QKACK

> *Calotropis procera* (CpCYP87A103)

MMFAAIFLTTFLFIIVSRWIYRWRNPNPCNGILPPGSMGLPIIGESLAYFTPYFKDDIPLFV
RERVQKYGPLFRTSLVGQSVIVSTDPEVNYIYFQQEGNLFQCWYSESVLKVLGESQSM
AVQAGAFHKYLKNLCLSLVGPENLKETLMYEMDQNTIEHLQSWGTTIGNLDAKDATAEL
VFKLAARKIINYDEKKSGLKLRDCYKAFMDGFISFPLYIPGTAFYACIQGRKKALKVIKEV
FNQRRGIGATEEKQKVFDYILEEVDNKESFITEGIALDLVFLLLFASHETTSTAMTMAM
KFITESPAVLAELVREHEAILKNRENPESGITWKEYKGMTFTHMVINETVRIANIAPGIFR
KVMKEVEIKGYTIPAGWTVMVCPSTVHMNPKYENPLSFDPPWRWEGQELHSASKNF
MAFGGGMRLCVGADFAKLQMAIFLHHLVTKFRWTITHGGDTRKPGLLFPNGLHVQIS
AIKAN

> *Arabidopsis thaliana* (AtCYP87A2)

MWALLIIVSLLLISITHWVYSWRNPKCRGKLPFGSMGFPLLGESIQFFKPNKTS DIPPI
KERVKKYGPFIKTNLVGRPVIIVSTDADLSYFVFNQEGRCFQSWYPDTFTHIFGKKNVG
SLHGFMYKYLKNMVLTLFGHDGLKKMLPQVEMTANKRLELWSNQDSVELKDATASMI
FDLTAKKLISHDPDKSSENLRANFVAFIQGLISFPDIPGTAYHKCLQGRAKAMKMLRN
MLQERRENPRKNPSDFFDYVIEEIQKEGTILTEEIALDLMFVLLFASFETTSLALTLAIKFL
SDDPEVLKRLTEEHETILRNREDADSGLTWEEYKSMTYTFQFINETARLANIVPAIFRKA

LRDIKFKDYTIPAGWAVMVCPPAVHLNPEMYKDPLVFNPSRWEGSKVTNASKHFMAF
GGGMRFCVGTDFTKLQMAAFLHSLVTKYRWEEIKGGNITRTPGLQFPNGYHVKLHKK
RD

> ***Nicotiana benthamiana* (NbCYP87A122)**

MISVGMCI GAFLVLIHVVYNWRNPRCNGKLP PGSMGWPLLGETIPFFAPNTSSDIAPF
VKDRMQRYGPIFRTSVVGRPVIASTDPDLNYFIFQQEGQLFQSWYPDTFTEIFGKQNV
GSLHGFMKYKLNMLNLF GPESLKKMMPEVEEAAKNKLRW SGQTSVEMKEATAN
MIFDLTAKKLISYDSENSENLR ESFVAFIQGLISFPIDIPGTVYHKCLQGRKKAMKMLKT
LLEERRAKPRKEQSDFFDYVLEELQRKDTILTEAIALDLMFVLLFASFETTSLAITLATKF
LHDHPLALKELEEHEAIRRREN PASGLTWKEYKSMKFTFQVINETVRLANIVPAIFRK
ALRDVNFKGYTIPAGWAIMVCPPAVHLNPAKYQDPLEFNPWRWEGVEMNGASRNFM
AFGGMRFCVGTDFTKVQMAVFLHSLVTKYRWETIQGGDTLRTPGLQFPNGYHIRLS
EKDEKIQ

> ***Erysimum cheiranthoides* (EcCYP87A2)**

MWALFIWVSLLLISITHWVYSWRNPKCRGKLP PGSMGFPLLGETIQFFKPNTSSDIPFFI
KERVKKYGSIFKTNLVGRPVI VSTDADLSYFVFQQEGRCFQSWYPDTFTKIFGEKNVG
SLHGFMKYKLSMVLTLFGHDGLKKMLPQVEMTANKRLELWSNQDSVELKDATASMI
FYLTAKKLISHDPDKSSENLRANFVAFIQGLISFPDIPGTAYHKCLQGREGAMKMLRN
MLQERRKKPRKYP SDFFDYVILEIQKEGTILTEEIALDLMFVLLFASFETTSLAITLAIKFLS
DDPAVLKRLTEEHETILRNREDADSGLTWEEYKSMTYTFQFINETARLANIVPAIFRKAL
RDIKFKDYTIPAGWAVMVCPPAVHLNSETYKDPLVFNPSRWEGSKATNASKHFMAFG
GGMRFCVGTDFTKLQMAAFLHCLVTKYRWEEIKGGNILRTPGLQFPNGYHVRLHKKE
T

> ***Erysimum cheiranthoides* (EcCYP87A126)**

MSWALCIWVSLVVTGITT LVYKWRNPKCSGKLP PGSMGLPLLGETIQFFKPNTSDIQP
FIKERTKKYGPIFKTSLVGKSIIVTTDPDFSYFVFQQEGQSFQSWYPDTFVEIFGKQNLG
ALHGIIYKYLKHMVLSLFGFESLKNMLPEIEQTACKKLDLWSTQKSIELKESTANLIFDLT
AKKLISHDEEKSENLRDNYVAFIDGLISFPINLPGTAFYKCLKGRERVMSLRNMLKER
RKNPRKVASDFFDYVIEELKKEGTMLTESIALDLMFVLLFASFETTSLAITVAIKMLSDHP
SVLKRLTEEHAILRNRKDPNSGLTWEEYKSMTYTFQFMNETARLANIAPLICRKALKDI
QYKNYTIPANWPVMVPPAIHLDPNNYEDPLVFNPSRWEGSEFTNASKKFMAFGGGM
RFCIGTDFSKLQTA VFLHSLTKYSWEHISGGNMLRSPGLQFPNGYHVKINKKEI

> ***Oryza sativa* (OsCYP87A6)**

MOPYLQLASRLATTIPLAPRLYDANLLAASGAAMASSMAYIALLCALA AVVALLRWA
YRWSHPRSNGRLPPGSLGLPVIGETLQFFAPNPTCDLSPFVKERIKRYGSIFKTSVGR
PVVVSADPEMNYVVFQQEGKLFESWYPDTFTEIFGRDNVGS LHGFMKYKLT LVLRLY
GQENLKS VLLAETDAACRGLASWASQPSVELKEGISTMIFDLTAKKLIGYDPSKPSQV
NLRKNFGAFICGLISFPLNIPGTAYHECMEGRKNAMKVL RGMKMERMAEPERPCEDFF
DHVIQELRREKPLLTETIALDLMFVLLFASFETTALALTIGVKLLTENPKVVDALREEHEAI

IRNRKDPNSGVTWAEYKSMTFTSQVIMEIVRLANIVPGIFRKALQDVEIKGYTIPAGWGI
MVCPPAVHLNPEIYEDPLAFNPWRWQGKPEITGGTKHFMAFGGGLRFCVGTDLKVL
MATFIHSLVTKYSWRTVKGGNIVRTPGLSFPDGFHIQLFPKN

> ***Sesamum indicum* (SiCYP87A113)**

MFPAAFYIGALLIIAITNWLYHWRNPRCNGVLPPGSMGWPLIGETLQFFAPNTSSDIPPF
VKQRMQRYGPVFKTSLVGRPVIIVSTDADLNYFIFQQEGQLFQSWYPDTFTEIFGRQNV
GSLHGFMYKYLKNMVLNLFGPESLKKMLPEVEQASNRNLEKWTSSQIVEVKEATAKMI
FELTAKKLISYDSEKSTENLRENFVAFIQGLISFPVDIPGTAYHKCLQGRKKAMKMLKNM
LQERRERPRKVRTDFFDYVLEELQREDTLLTEAIALDLMFVLLFASFETTSLALTLATKF
LVEHPLVLKELTEEHEAIIKRRENPDGLTWSEYKSMRFTFQFINETVRLANIVPGIFRK
AMRETKFKGYTIPAGWAIMVCPVAVHLDPKKYRDPLNFPWRWEGIDTNGASRNFMFA
FGGGMRFVGTDFTKVQMAVFLHCLVTKYKWKAIKGGDILRTPGLQFPNGFHVHVTE
KDK

> ***Olea europaea* (OeCYP87A93)**

MFPAIFCIAAILVINITHWLYKWWNPDCNGVLPPGSMGWPLLGETLHFFAPNTSSDIPP
FVKERIHRYGPIFKTSLVGRPVIIVSTDADLNYFIFQQEGQLFESWYPSTFVEIFGRQNVG
SLHGFMYKYLKNMVLNLFGPESLKKMLPDVEQASNIYLKRWSSQTMTEMKESTSKMIF
DLTAKKLISYDVEKSSDNLKRNFKAFIKGLISFPLNIPGTAYHKCLQGRKKAMKMLKSML
QERRERPRKFQSDFFDYVLEELQRQDTILTESIGLDLMFVLLFASHETTSLALTLAMKFL
SDHPLVLKELTEEHEAIIKKREIPDGLTWNEYKSMKFTFQFINETVRLANIVPGIFRKAL
KDIKFKGHTIPAGWAVMVCPPAVHLNPAKYSNPLDFNPWRWEGVDTNGASRNFMFAF
GGGMRFVGTDFTKVQMAIFLHCLVTKYKWQAIAKGGDIVRTPGLQFPNGFHISLSEKN
AQK

> ***Homo sapiens* CYP11A1**

MLAKGLPPRSVLVKGCQTFLSAPREGLGRLRVPTGEGAGISTRSPRPFNEIPSPGDNG
WLNLYHFWRETGTHKVHLHHVQNFQKYGPIYREKLGNVESVYVIDPEDVALLFKSEGP
NPERFLIPPWVAYHQYYQRPIGVLLKKSAAWKKDRVALNQEVMAPKATKNFLPLLDVAV
SRDFVSVLHRRIKKAGSGNYSGDISDDLFRFAFESITNVIFGERQGMLEEVVNPEAQR
IDAIYQMFHTSVPMNLNPPDLFRLFRKTWVDHVAAWDVIFSKADIYTNFYWELRQK
GSVHHDYRGILYRLLGDSKMSFEDIKANVTEMLAGGVDTTSMTLQWHLIYEMARNLKV
QDMLRAEVLAARHQAQGDMAATMLQLVPLLKASIKETLRLHPISVTLQRYLVNDLVLRDY
MIPAKTLVQVAIYALGREPTFFFDPENFDPTRWLSKDKNITYFRNLGFGWGVQRCLGR
RIAELEMTIFLINMLENFRVEIQHLSDVGTTFNLILMPEKPISTFWPFNQEATQQ