Supplementary Table 1: Average and standard deviation for each interaction energy (IE) value of filtered docking poses for each P450-substrate combination. The global average IE for docking with the C15-hydroxy and C15,16-dihydroxy substrates suggests that only these two substrate species interact with the P450 active site. CPP = copalyl pyrophosphate.

Substrate	P450	Functional Group		
		C15-pyrophosphate	C15-hydroxy	C15,16-dihydroxy
8,13-CPP	CYP71Z25	-2.4±0.5	-6.5±0.5	-4.8±0.7
	CYP71Z26	-0.9±0.8	-4.6±0.8	-4.5±1.1
	CYP71Z27	-1.6±0.8	-5.8±0.8	-5.2±0.7
	CYP71Z28	-0.4±0.8	-6.1±0.4	-4.3±0.5
	CYP71Z29	-2.2±0.7	-5.5±0.4	-5.0±0.5
(+)-CPP	CYP71Z25	-1.7±0.6	-6.3±0.3	-5.6±0.5
	CYP71Z26	-0.3±1.2	-5.8±0.9	-3.8±0.8
	CYP71Z27	-1.8±0.5	-5.9±0.4	-5.8±0.5
	CYP71Z28	-0.2±0.6	-6.0±0.2	-5.5±0.4
	CYP71Z29	-1.5±0.8	-4.7±0.8	-3.9±0.8
cis-trans-CLPP	CYP71Z25	-1.0±1.1	-5.6±0.4	-4.7±0.6
	CYP71Z26	-0.0±0.9	-5.3±0.8	-4.8±0.8
	CYP71Z27	-1.4±0.5	-5.2±0.5	-5.9±0.9
	CYP71Z28	-0.5±1.0	-4.8±0.3	-5.6±0.2
	CYP71Z29	-1.3±0.9	-5.6±0.2	-5.4±0.4
ent-CPP	CYP71Z25	-1.5±0.4	-6.4±0.2	-5.6±0.2
	CYP71Z26	-0.2±0.9	-5.4±0.7	-3.6±0.6
	CYP71Z27	-1.2±0.6	-6.1±0.5	-6.2±0.4
	CYP71Z28	-0.2±0.5	-5.5±0.4	-4.2±0.5
	CYP71Z29	-0.9±1.3	-5.7±0.7	-3.6±0.8
syn-CPP	CYP71Z25	-1.7±0.5	-6.4±0.4	-5.9±0.6
	CYP71Z26	-0.1±1.1	-5.4±0.7	-5.1±0.7
	CYP71Z27	-0.9±0.5	-6.4±0.7	-6.2±0.5
	CYP71Z28	-0.4±0.8	-5.6±0.4	-5.5±0.4
	CYP71Z29	-1.0±0.7	-5.5±0.6	-5.3±0.4
Average		-0.9±0.9	-5.7±0.5	-5.0±0.8

Supplementary Table 2: Synthetic genes used in this study.

>CYP71Z25
ATGGCTAAAAAGACATCCTCGAAAGGGAAACTCCCCCCAGGGCCTCGCATGCTGCCC
GTAATTGGGAGCTTACACCATCTCTTGAGTTCACCTCTGCTGTTCCGTGTCTTACGGG
GTTTAGCGAAAAAGCATGGGCCACTGATGACATTGCGCTTAGGGGAAGTGCCGGCAC
TGGTTGCGTCAAGCATGGAAGCAGCTCAGGCGATTCTTAAAGTGCACGACACTAATT
TTGCAGATCGGTTCACTCCTGCGACTTTTGCCACCGTCGCTTATGGTGGCACCAATCT
GATATTGTCTCCGTACGGTGAACGGTGGCGGCATTTGAGAAAAATCGTTGTTCAGGA
GATGCTTACTGCAACGCGCGTCCAGAGCTTCAAACATATTAGACAGGAGGAAGTCGG
TCGTTTCTTACACGGAATGGCTGCGAGCGCTGCCGCAGGGACTGCGGTAAACTTCTC
CACAGCAGTATCTAAACTGATTAACGACGCCTTTCTGCGGGAGTGTGTCGGTTCTCGA
TGTAAATATCAGGATGAATTCTTGGACGCCGTTCACACGGCGTCCCTCTTAGCATCTG
GGGTGACAATCGCTGATTTGTATCCCTCTAGTAGAATTATGCAGATGCTGGGAACCGC
ACCTCGTAAAGCCCTGGCGGTAAGACGTCGTGTTGATAGAATCGTTAAACAAATTATC
CAAGAGGCAAAAGAAGCAATGGAGTGTGACGATAAGACTGTCGATGATTCTTTTATT
AGTCTGCTTCTCCGGCTGCAAAAAGAAGGGAGTATGCCGATACCGCTGACGAATGAG
ACAATAATTGCGTTAATGTTCGATATGTTGGCTGCGGGATCCGAAACATCATCAACCAC
CTTGAATTGGGCACTAACTGAACTGATTCGTAGCCCAGCTGCTATGGCGCGCGCCCAA
GCAGAAGTACGTGAAGCTTTCAAAGGAAAAAGTATTATAACGGATGACGACATCGCC
AAATCAGGCATTTCTTACCTAAAACTCGTGTTCAAGGAAACACTGCGTCTGCATCCGT
CCTCACCGTTACTGATTCCGCGCCAATGCCGAGAAACCTGTCAGGTTATGGGCTATGA
TATCCCGAAGGGGACAGCCGTTTTTGTTAACGTGTGGGCAATTGGGAGAGATCCGTT
GTACTGGGAAGATCCTGAAGAATTTAAGCCGGAACGGTTTGAAACGAACAACCTGG
ATTTCAGAGGAACAAACTTTGAGTTCATACCGTTCGGTGCCGGTCGTCGGATGTGTCC
AGGGATTAATCTGGGTCTGGCTAACATCGAACTTGCTTTAGCTTCCCTTTTATATCATTT
TGACTGGAAATTACCGAAAGGTATGGAACCTAAAGATGTTGAAATGCGTGAGGCTGT
AGGTATGGTAGCGAGCAAAGAAACCAGCCTGATTGTCCATCCAGTCACATTTATTCCG
CCTGCCGTTGCGGCGTGA

>CYP71Z26
ATGGCGAAAAAAACCTCTAGTAAAGGTAAGTTGCCTCCGGGACCACGGATGCTGCCG
GTTATCGGATCCTTACACCACTTGCTCAGCTCACCGCTGCTGTTCCGAGTTCTGCGGG
GCCTCGCGAAAAAGCATGGGCCTTTGATGACCCTACGATTAGGCGAAGTACCAGCTC
TGGTGGCTAGTTCTATGGAAGCGGCTCAGGCAATTCTCAAAGTGCACGACACGAATT
TTGCAGATCGGTTCACTCCCGCAACGTTTGCCACGGTGGCTTACGGCGGCACAAATTT
GATACTAAGTCCATACGGCGAGCGTTGGCGCCATCTGCGTAAGATTGTTGTTCAGGAG
ATGCTCACAGCCACACGTGTTCAGAGCTTTAAACATATCCGCCAGGAGGAGGTAGGC
AGGTTTTTACAGGGGATGGCAGCATCTGCGGCTGCGGGCACTGCCGTAAACTTTTCC
ACCGCAGTTAGCAAACTGATTAACGACGCTTTCTTACGAGAATGCGTAGGCTCACGTT
GTAAGTATCAAGACGAGTTTCTGGACGCCGTTCATACGGCCAGTCTGCTGGCAAGTG
GGGTCACCATCGCCGATCTCTATCCATCTAGTAGGATTATGCAGATGCTGGGAACAGC
GCCGCGTAAAGCCCTAGCAGTTAGGCGTCGGGTTGACCGCATTGTGAAACAGATTATT
CAGGAAGCAAAAGAAGCGATGGAGTGTGACGATAAAACCGTTGACGACTCTTTTATT
TCGCTGTTACTTCGCTTACAAAAAGAAGGATCGATGCCTATCCCTTTAACCAATGAAA
CAATTATCGCCCTGATGTTTGACATGCTGGCCGCGGGTAGTGAAACTTCCAGTACAAC
CCTGAACTGGGCTTTGACCGAGTTAATTCGCAGTCCGGCTGCCATGGCACGCGCCCA
GGCAGAAGTTCGTGAAGCGTTCAAGGGAAAATCCATCATTACTGATGATGATATTGCA
AAATCGGGTATTTCTTACCTGAAATTGGTGTTCAAGGAAACGCTGAGACTACACCCAT
CATCCCCTCTGCTGATTCCTCGCCAGTGTCGTGAAACCTGTCAGGTGATGGGTTACGA
TATTCCGAAGGGTACTGCTGTATTTGTAAACGTCTGGGCAATTGGTCGCGATCCGTTG

TATTGGGAAGATCCAGAAGAGTTTAAACCTGAACGCTTTGAAACTAATAACCTCGATT
TCCGTGGTACTAACTTCGAATTCATACCTTTTGGTGCGGGGAGACGCATGTGTCCGGG
CATAAACCTGGGGCTGGCGAATATTGAGCTAGCGCTGGCGTCTCTACTCTACCATTTC
GATTGGAAGTTGCCGAAAGGTATGGAGCCGAAAGATGTGGAAATGAGAGAAGCCAC
AGGAATGGTAGCTAGCAAAGAAACGAGCCTGATCGTGCATCCCGTAACCTTTATCCCA
CCGGCGGTGGCGTGA

>CYP71Z27
ATGGCGAAAAAAACCAGTAGTAAAGGCAAACTTCCTCCGGGTCCACGTATGCTGCCA
GTCATTGGAAGTCTTCATCATTTAGTGTCGTCACCGTTATTGTTTCGTGTACTGAGGGA
ACTGGCTAAAAAACATGGTCCTTTAATGATGTTACGCTTAGGGGAGGTTCCAGCTCTG
GTTGCGAGCTCGATGGAGGCCGCCCAGGCTATTCTTAAGGTTCACGACACGAGCTTC
GCAGATAGATATACACCTGCGACAAGTGCCACCATCGCTTATGGTGGCACTGATCTCA
TTCTGAGCCCTTATGGTGAAAGATGGCGTCACTTGCGCAAAATTGTGGTACAAGAAAT
GCTGACTGCAACGAGAGTTCAGTCCTTTAAGTATATCCGCGAAGAGGAGGTCGCTAG
ATTTTTGCAAGCGATGGCGGCGGCCGCTGCGACAGGGACAGCTGTCGATTTTTCCAC
AGCAGTGGCTAAACTTGTGAACGACGCCTTTCTACGTGAATGTGTAGGTTCCCGGTG
CAAATATCAGGACGAATACTTGGATGCAGTACATACCGTCACCCAGCTGGCCAGCGG
GATAACCATCGCCGATCTGTATCCTTCTTCTCGTATTATGCAAATGCTGGGTACAGCCC
CACGGAAAGGTCTTGCATATCGTCAGCGTATTGACAGAATTTTGAAACAGATCATCCA
GGAAGCGAAAGAAGCTATGGAATGCGAAGACGAGACCGCTCATGAATCTTTTGTAAG
TTTATTACTTCGGCTGCAAAAAGACGGGTCCATGCCTATCCCGCTGACGAACGAAACC
ATAATCGCACTGATGTTTGATATGCTGGCCGCAGGAAGCGACACCTCAAGTACCATTC
TGAACTGGGCGATGACCGAACTGATACGTTCTCCGGCTGCAATGGCACGGGCGCAGG
CAGAGGTTCGAGAAGCTTTTAAAGGTAAATCGATCATTACAGATGACGATATTGCCGA
AAGCGGCATTAGTTATCTTAAACTGGTCTTCAAAGAAACACTGCGTCTGCATCCCACG
TCTCCTTTACTCATACCACGTCAATGTCGGGAGACATGTCAAGTTATGGGGTACGACA
TACCAAAAGGAATGGCAGTTTTTGTCAACGTTTGGGCAATTGGCCGTGATCCAAGCT
ATTGGGATGACCCGGAAGAATTCAAACCGGAACGTTTCGAGACCAATAATCTGGACT
TTCGTGGTACAAACTTTGAATTCATTCCGTTTGGAGCCGGTCGTCGCATGTGTCCAGG
TATAAATCTTGGTCTGGCAAACATCGAACTGGCATTAGCGTCTCTGCTGTATCATTTTG
ATTGGAAACTGCCCAAAGGAATGGAACCGAAGGATGTGGATATGAGAGAAGCAGTA
GGTATTGTTGCATCAAAAGAGACCTCGTTAATTGTACATCCGGTTACGTTTATTCCATT
GACCGTTGCAGCATAA

>CYP71Z28
ATGGCCAAAAAGACCAGCAGCAAAGGTAAACTGCCTCCTGGTCCGTGGATGCTGCCG
GTTATTGGTAGCCTGCATCATCTGGTTAGCAGTCCGCTGCTGTTTCGTGTTCTGCGTGG
TCTGGCAAAAAAACATGGTCCGCTGATGACCCTGCGTTTTGGTGAAGTTCCGGCACT
GGTTGCAAGCAGCATGGAAGCAGCACAGGCAATTCTGAAAGTTAATGATACCCGTTT
TGCCGATCGTTTTGCACCGGCAACCAGCGCAACCATTACCTATGGTGCAACCAATCTG
ATTCTGAGCCCGTATGGTGAACGTTGGCGTCAGCTGCGTAAAATTGTTGTTCAAGAAA
TGCTGACCACCACACGTGTTCAGAGCTTTAAACATATTCGTCAAGAAGAAGTTGCCC
GTTTTCTGCAAGGTATGGCAGCAGCAGCCGCAAATGGCACCGCAGTTGATTTTTCAA
CCGCAGTTAGCAAACTGGTGAATGATACCTTTCTGCGTGAATGTGTTGGTAGCCGTTG
TAAATATCAGGATGAATTTCTGGATGCAGTTCATACCGCAAGTCAGCTGGCAAGCGGT
ATTACCATTGCAGATCTGTATCCGAGCAGCCGTATTATGCAGATGCTGGGCACCGCAC
CGCGTAAAGGTCTGGCATGTCGTCAGCGTATTGATCGTATTCTGCGTCAGATTATTCAA
GAGGCAAAAGAAGCAATGGAATGCGACGATAAAACCGCACATGAAAGCTTTGTTAG
CCTGCTGTTACGTCTGCAGAAAGATGGTAGCATGCCGATTCCGCTGACCAATGAAACC
ATTATTGCACTGATGTTTGATATGCTGGCAGCAGGTAGCGATACCAGCAGTACCATTCT
GAATTGGGCAATGACCGAACTGATTCGTAGCCCGACCGCAATGGCACGTGCACAGGC

AGAAGTTCGTCAGGCATTTAAAGGTAAAAGCATCATTACCGATGATGACATGGCCAAA
TCAGGTATCAGCTATCTGAAACTGGTGTTCAAAGAAACCCTGCGTCTGCATCCGACCT
CACCGCTGCTGATTCCGCGTCAGTGTCGTGAAACCTGTCAGGTTATGGGTTATGATATT
CCGAAAGGTACAGCCGTTTTTGTTAATGTTTGGGCAATTGGTCGTGATCCGAGCTATT
GGGAAGATGCAGAAGATTTTAAACCGGAACGCTTTGAAACCAACAATCTGGATTTTC
GTGGCACCAACTTTGAATTTATTCCGTTTGGTGCAGGTCGTCGTATGTGTCCGGGTATT
AATCTGGGTTTAGCAAATATTGAACTGGCACTGGCAAGTCTGCTGTATCATTTTGATTG
GAAACTGCCGAAAGGCATGGAACCGAAAGATGTGGATATGCGCGAAGTTGTTGGTAT
GGTTGCATCAAAAGAAACCAGCCTGACCGTTCATCCGGTTACCTTTATTCCGCCTGCA
GTTGTTTAA

>CYP71Z25:MRS
ATGGCTAAAAAGACATCCTCGAAAGGGAAACTCCCCCCAGGGCCTCGCATGCTGCCC
GTAATTGGGAGCTTACACCATCTCTTGAGTTCACCTCTGCTGTTCCGTGTCTTACGGG
GTTTAGCGAAAAAGCATGGGCCACTGATGACATTGCGCTTAGGGGAAGTGCCGGCAC
TGGTTGCGTCAAGCATGGAAGCAGCTCAGGCGATTCTTAAAGTGCACGACACTAATT
TTGCAGATCGGTACACTCCTGCGACTTCTGCCACCATCGCTTATGGTGGCACCGATCT
GATATTGTCTCCGTACGGTGAACGGTGGCGGCATTTGAGAAAAATCGTTGTTCAGGA
GATGCTTACTGCAACGCGCGTCCAGAGCTTCAAACATATTAGACAGGAGGAAGTCGG
TCGTTTCTTACACGGAATGGCTGCGAGCGCTGCCGCAGGGACTGCGGTAAACTTCTC
CACAGCAGTATCTAAACTGATTAACGACGCCTTTCTGCGGGAGTGTGTCGGTTCTCGA
TGTAAATATCAGGATGAATTCTTGGACGCCGTTCACACGGCGACCCAGTTAGCATCTG
GGGTGACAATCGCTGATTTGTATCCCTCTAGTAGAATTATGCAGATGCTGGGAACCGC
ACCTCGTAAAGGCCTGGCGTATAGACAGCGTGTTGATAGAATCCTGAAACAAATTATC
CAAGAGGCAAAAGAAGCAATGGAGTGTGACGATAAGACTGTCGATGATTCTTTTATT
AGTCTGCTTCTCCGGCTGCAAAAAGAAGGGAGTATGCCGATACCGCTGACGAATGAG
ACAATAATTGCGTTAATGTTCGATATGTTGGCTGCGGGATCCGATACATCATCAACCAT
CTTGAATTGGGCAATGACTGAACTGATTCGTAGCCCAGCTGCTATGGCGCGCGCCCAA
GCAGAAGTACGTGAAGCTTTCAAAGGAAAAAGTATTATAACGGATGACGACATCGCC
AAATCAGGCATTTCTTACCTAAAACTCGTGTTCAAGGAAACACTGCGTCTGCATCCGA
CCTCACCGTTACTGATTCCGCGCCAATGCCGAGAAACCTGTCAGGTTATGGGCTATGA
TATCCCGAAGGGGACAGCCGTTTTTGTTAACGTGTGGGCAATTGGGAGAGATCCGTT
GTACTGGGAAGATCCTGAAGAATTTAAGCCGGAACGGTTTGAAACGAACAACCTGG
ATTTCAGAGGAACAAACTTTGAGTTCATACCGTTCGGTGCCGGTCGTCGGATGTGTCC
AGGGATTAATCTGGGTCTGGCTAACATCGAACTTGCTTTAGCTTCCCTTTTATATCATTT
TGACTGGAAATTACCGAAAGGTATGGAACCTAAAGATGTTGAAATGCGTGAGGCTGT
AGGTATCGTAGCGAGCAAAGAAACCAGCCTGATTGTCCATCCAGTCACATTTATTCCG
CCTGCCGTTGCGGCGTGA

>CYP71Z27:MRS
ATGGCGAAAAAAACCAGTAGTAAAGGCAAACTTCCTCCGGGTCCACGTATGCTGCCA
GTCATTGGAAGTCTTCATCATTTAGTGTCGTCACCGTTATTGTTTCGTGTACTGAGGGA
ACTGGCTAAAAAACATGGTCCTTTAATGATGTTACGCTTAGGGGAGGTTCCAGCTCTG
GTTGCGAGCTCGATGGAGGCCGCCCAGGCTATTCTTAAGGTTCACGACACGAGCTTC
GCAGATAGATTTACACCTGCGACATTTGCCACCGTCGCTTATGGTGGCACTAATCTCAT
TCTGAGCCCTTATGGTGAAAGATGGCGTCACTTGCGCAAAATTGTGGTACAAGAAAT
GCTGACTGCAACGAGAGTTCAGTCCTTTAAGTATATCCGCGAAGAGGAGGTCGCTAG
ATTTTTGCAAGCGATGGCGGCGGCCGCTGCGACAGGGACAGCTGTCGATTTTTCCAC
AGCAGTGGCTAAACTTGTGAACGACGCCTTTCTACGTGAATGTGTAGGTTCCCGGTG
CAAATATCAGGACGAATACTTGGATGCAGTACATACCGTCTCCCTGCTGGCCAGCGGG
ATAACCATCGCCGATCTGTATCCTTCTTCTCGTATTATGCAAATGCTGGGTACAGCCCC
ACGGAAAGCTCTTGCAGTTCGTCGTCGTATTGACAGAATTGTGAAACAGATCATCCA

GGAAGCGAAAGAAGCTATGGAATGCGAAGACGAGACCGCTCATGAATCTTTTGTAAG
TTTATTACTTCGGCTGCAAAAAGACGGGTCCATGCCTATCCCGCTGACGAACGAAACC
ATAATCGCACTGATGTTTGATATGCTGGCCGCAGGAAGCGAAACCTCAAGTACCACTC
TGAACTGGGCGCTGACCGAACTGATACGTTCTCCGGCTGCAATGGCACGGGCGCAGG
CAGAGGTTCGAGAAGCTTTTAAAGGTAAATCGATCATTACAGATGACGATATTGCCGA
AAGCGGCATTAGTTATCTTAAACTGGTCTTCAAAGAAACACTGCGTCTGCATCCCTCG
TCTCCTTTACTCATACCACGTCAATGTCGGGAGACATGTCAAGTTATGGGGTACGACA
TACCAAAAGGAATGGCAGTTTTTGTCAACGTTTGGGCAATTGGCCGTGATCCAAGCT
ATTGGGATGACCCGGAAGAATTCAAACCGGAACGTTTCGAGACCAATAATCTGGACT
TTCGTGGTACAAACTTTGAATTCATTCCGTTTGGAGCCGGTCGTCGCATGTGTCCAGG
TATAAATCTTGGTCTGGCAAACATCGAACTGGCATTAGCGTCTCTGCTGTATCATTTTG
ATTGGAAACTGCCCAAAGGAATGGAACCGAAGGATGTGGATATGAGAGAAGCAGTA
GGTATGGTTGCATCAAAAGAGACCTCGTTAATTGTACATCCGGTTACGTTTATTCCATT
GACCGTTGCAGCATAA

Supplementary Table 3: Oligonucleotides used in this study.

Primer name	Sequence (with mutated position underlined)
CYP71Z25-F86S-F	CGGTTCACTCCTGCGACTTCTGCCACCGTCGCTTAT
CYP71Z25-F86S-R	ATAAGCGACGGTGGCAGAAGTCGCAGGAGTGAACCG
CYP71Z27-S86F-F	AGATATACACCTGCGACATTTGCCACCATCGCTTAT
CYP71Z27-S86F-R	ATAAGCGATGGTGGCAAATGTCGCAGGTGTATATCT
CYP71Z25-N95D-F	GTCGCTTATGGTGGCACCGATCTGATATTGTCTCCG
CYP71Z25-N95D-R	CGGAGACAATATCAGATCGGTGCCACCATAAGCGAC
CYP71Z27-D95N-F	ATCGCTTATGGTGGCACTAATCTCATTCTGAGCCCT
CYP71Z27-D95N-R	AGGGCTCAGAATGAGATTAGTGCCACCATAAGCGAT
CYP71Z25-E283D-F	ATGTTGGCTGCGGGATCCGATACATCATCAACCACC
CYP71Z25-E283D-R	GGTGGTTGATGATGTATCGGATCCCGCAGCCAACAT
CYP71Z27-D283E-F	ATGCTGGCCGCAGGAAGCGAAACCTCAAGTACCATT
CYP71Z27-D283E-R	AATGGTACTTGAGGTTTCGCTTCCTGCGGCCAGCAT
CYP71Z25-T288I-F	TCCGAAACATCATCAACCATCTTGAATTGGGCACTA
CYP71Z25-T288I-R	TAGTGCCCAATTCAAGATGGTTGATGATGTTTCGGA
CYP71Z27-I288T-F	AGCGACACCTCAAGTACCACTCTGAACTGGGCGATG
CYP71Z27-I288T-R	CATCGCCCAGTTCAGAGTGGTACTTGAGGTGTCGCT
CYP71Z25-S346T-F	ACACTGCGTCTGCATCCGACCTCACCGTTACTGATT
CYP71Z25-S346T-R	AATCAGTAACGGTGAGGTCGGATGCAGACGCAGTGT
CYP71Z27-T346S-F	ACACTGCGTCTGCATCCCTCGTCTCCTTTACTCATA
CYP71Z27-T346S-R	TATGAGTAAAGGAGACGAGGGATGCAGACGCAGTGT
CYP71Z25-S347T-F	CGTCTGCATCCGTCCACTCCGTTACTGATTCCG
CYP71Z25-S347T-R	CGGAATCAGTAACGGAGTGGACGGATGCAGACG
CYP71Z27-S347T-F	CGTCTGCATCCCACGACTCCTTTACTCATACCA
CYP71Z27-S347T-R	TGGTATGAGTAAAGGAGTCGTGGGATGCAGACG
CYP71Z25-M463I-F	CGTGAGGCTGTAGGTATTGTAGCGAGCAAAGAA
CYP71Z25-M463I-R	TTCTTTGCTCGCTACAATACCTACAGCCTCACG
CYP71Z27-I463M-F	AGAGAAGCAGTAGGTATGGTTGCATCAAAAGAG
CYP71Z27-I463M-R	CTCTTTTGATGCAACCATACCTACTGCTTCTCT

Supplementary Table 4: Abbreviations and Accession numbers for proteins used for phylogenetic studies.

Protein name	Species	Accession
OsCYP71Z6	*Oryza sativa*	A3A871
OsCYP71Z7	*Oryza sativa*	Q6YV88
ZmCYP71Z16	*Zea mays*	Zm00001d014136
ZmCYP71Z18	*Zea mays*	Zm00001d014134
OsCYP76M6	*Oryza sativa*	XP_015625955
OsCYP76M7	*Oryza sativa*	XP_015623593
OsCYP99A3	*Oryza sativa*	XP_015634021
OsCYP701A6	*Oryza sativa*	XP_015643248
OsCYP701A8	*Oryza sativa*	XP_015640905
ZmCYP701A26	*Zea mays*	Zm00001d046342
ZmCYP701A43	*Zea mays*	Zm00001d046344
PvCYP71Z25	*Panicum virgatum*	Pavir.1KG341400[1]
PvCYP71Z26	*Panicum virgatum*	Pavir.1KG382300[1]
PvCYP71Z27	*Panicum virgatum*	Pavir.1KG382400[1]
PvCYP71Z28	*Panicum virgatum*	Pavir.1NG304500[1]
PvCYP71Z29	*Panicum virgatum*	Pavir.1NG309700[1]
PhA02218	*Panicum hallii*	Pahal.1G276500[2]
PhA02220	*Panicum hallii*	Pahal.1G276700[2]

[1] Accession number for *Panicum virgatum* genome assembly v4.1 (www.phytozome.org)

[2] Accession number for *Panicum hallii* genome assembly v3.1 (www.phytozome.org)