

Additional File 9. GO frequencies for differentially expressed (DE) transcripts. Stem and Branch secondary xylem were the tissues presented in the table. DE transcripts were obtained when comparing 12- and 60-year-old teak trees in both tissues. The first column for GO frequencies is organized from lowest to highest.

GO Category: BIOLOGICAL PROCESS	GO Frequencies	
	Stem Secondary xylem	Branch Secondary xylem
<i>Catabolic Process</i>	134	101
<i>Cellular protein modification process</i>	118	10
<i>Response to stress</i>	117	92
<i>Cellular amino acid metabolic process</i>	104	56
<i>Carbohydrate metabolic process</i>	99	76
<i>Response to abiotic stimulus</i>	93	61
<i>Signal transduction</i>	79	53
<i>Lipid metabolic process</i>	73	37
<i>Transcription, DNA-dependent</i>	63	46
<i>Reproduction</i>	61	0
<i>Secondary metabolic process</i>	52	32
<i>Generation of precursor metabolites and energy</i>	45	30
<i>Anatomical structure morphogenesis</i>	42	24
<i>Embryo development</i>	34	21
<i>Response to endogenous stimulus</i>	33	26
<i>Ion transport</i>	33	0
<i>Response to biotic stimulus</i>	32	30
<i>Protein transport</i>	32	0
<i>DNA metabolic process</i>	31	18
<i>Cell cycle</i>	28	13
<i>Cell differentiation</i>	26	16
<i>Response to external stimulus</i>	23	16
<i>Translation</i>	21	14
<i>Cytoskeleton organization</i>	17	0
<i>Cell growth</i>	14	12
<i>Cellular homeostasis</i>	13	10
<i>Cell death</i>	9	6
<i>Mitochondrion organization</i>	7	0
<i>Transport</i>	0	104
<i>Regulation of gene expression, epigenetics</i>	0	5
<i>Pollination</i>	0	6
<i>Photosynthesis</i>	0	23
<i>Cellular component organization</i>	0	70
<i>Flower development</i>	0	19
TOTAL	1433	1027

GO Category: MOLECULAR FUNCTION	GO Frequencies	
	Stem Secondary xylem	Branch Secondary xylem
<i>Nucleotide binding</i>	194	128
<i>Protein binding</i>	159	123
<i>Protein kinase activity</i>	60	0
<i>DNA binding</i>	45	45
<i>RNA binding</i>	35	24
<i>Peptidase activity</i>	32	0
<i>Sequence-specific DNA binding transcription factor activity</i>	25	16
<i>Nuclease activity</i>	18	6
<i>Calcium ion binding</i>	18	0
<i>Electron carrier activity</i>	15	0
<i>Enzyme regulator activity</i>	14	11
<i>Structural molecule activity</i>	12	7
<i>Ion channel activity</i>	11	0
<i>Phosphoprotein phosphatase activity</i>	9	0
<i>Carbohydrate binding</i>	9	0
<i>Signal transducer activity</i>	8	10
<i>Lipid binding</i>	5	5
<i>Transport activity</i>	0	53
<i>Receptor activity</i>	0	6
<i>Chromatin binding</i>	0	9
<i>Kinase activity</i>	0	48
TOTAL	669	491

GO Category: CELLULAR COMPONENT	GO Frequencies	
	Stem Secondary xylem	Branch Secondary xylem
<i>Plastid</i>	138	101
<i>Protein complex</i>	94	0
<i>Plasma membrane</i>	87	58
<i>Cytosol</i>	61	27
<i>Mitochondrion</i>	55	39
<i>Vacuole</i>	37	25
<i>Nucleoplasm</i>	34	28
<i>Endoplasmic reticulum</i>	33	15
<i>Thylakoid</i>	30	30
<i>Extracellular region</i>	30	22
<i>Ribosome</i>	16	10
<i>Golgi apparatus</i>	15	8
<i>Cell wall</i>	11	15
<i>Nucleolus</i>	9	0
<i>Endosome</i>	7	0
<i>Chromosome</i>	6	0
<i>Peroxisome</i>	5	7
<i>Cytoskeleton</i>	5	0
TOTAL	673	385