

LIST OF ABBREVIATIONS

(-)	approximate
1 ^o PCR	primary polymerase chain reaction
2 ^o PCR	secondary polymerase chain reaction
' (prime)	denotes a truncated gene at the indicated side
A ₂₆₀	absorption at 260 nm
A ₂₈₀	absorption at 280 nm
A ₃₂₀	absorption at 320 nm
A ₅₈₀	absorption at 580 nm
AA	ascorbic acid
ABA	abscisic acid
ABF	abscisic acid factor
ABRE	abscisic acid responsive element
ACC	1-aminocyclopropane-1-carboxylic acid
AFLP	amplified fragment length polymorphism
AMV	avian myeloblastosis virus reverse transcriptase
AP2	apetala2
APX	ascorbate peroxidase
ATP	adenosine triphosphate
B.C	before christ
BEEM	better equipment for electron microscopy
BHT	butylated hydroxytoluene
BLAST	basic local alignment search tool
BMAA	B-methylamino-L-alanine
bp	base pair
CAT	catalase
CBF	C-repeat binding factor
CDD	conserved domain database
cDNA	complementary deoxyribonucleic acid
cDNA-AFLP	cDNA-amplified fragment length polymorphism
CDP-ME	4-Diphosphocytidyl-2C-methyl-D- erythritol
cds	coding sequence

cfu	colony forming unit
chl	chlorophyll
CI	chloroform isoamylalcohol
cm	centimetre
CoA	coenzyme A
CTAB	cetyl trimethyl ammonium bromide
CUL	cullin
d	days
dbEST	database of expressed sequence tags
DCL1	dicer-like 1
DEPC	diethyl pyrocarbonate
dia	diameter
DMSO	dimethyl sulfoxide
DNA	deoxyribonucleic acid
DNase I	deoxyribonuclease I
DNPH	2,4-dinitrophenylhydrazine
DNS	3, 5-dinitro-salicylic acid
dNTP	deoxynucleotide triphosphate
DRE	dehydration-responsive element
DREB	dehydration responsive element binding
dsDNA	double-stranded deoxyribonucleic acid
DTT	1,4-dithiothreitol
DW	dry weight
EC	electrical conductivity
ECG	epicatechin gallate
ECQ	epicatechin quinone
EDTA	ethylenediaminetetraacetate
EGCG	epigallocatechin gallate
EGCGQ	epigallocatechin gallate quinone
ERD	early-responsive to dehydration
ERF	ethylene response factor
ESTs	expressed sequence tags
EST-SSRs	expressed sequence tags-simple sequence repeats
et. al	<i>et alia</i>

e-value	expected value
Exp.	experimental
FAO	food and agricultural organisation
FASTA	fast all
FCR	folin-ciocalteu reagent
FSL	forward subtracted library
FW	fresh weight
g	gram
GA	gibberellic acid
GC	guanine-cytosine
GLR	glutamate receptor
GO	gene ontology
GR	glutathione reductase
GSSG	glutathione disulfide
GSH	γ -glutamylcysteinylglycine (glutathione)
GST	glutathione S-transferase
h	hours
ha	hectars
HCl	hydrochloric acid
HMM	hidden markov models
HPLC	high pressure liquid chromatography
HSFs	heat shock factors
HSPs	heat shock proteins
HYL1	hyponastic leaves 1
IAA	indole acetic acid
ID	Identity
IPTG	Isopropyl β -D-1-thiogalactopyranoside
JA	jasmonic acids
JTT	Jones, Taylor & Thornton
kb	kilobase
kcal	kilocalorie
kDa	kilodalton
kg	kilogram
kPa	kilopascal

kV	kilovolt
LB	luria bertani
LEA	late embryogenesis abundant proteins
LiCl	lithium chloride
LOR	length of read
M	molar
MAP	mitogen activated protein
max.	maximum
MDA	malondialdehyde (or 3,4-methylenedioxyphenylisopropylamine)
MEGA	molecular evolutionary genetics analysis
mg	milligram
µg	microgram
µl	microlitre
µm	micrometer
µmol	micromole
µM	micromolar
m	meter
min	minutes
MFE	minimal free energy
MIPS	major intrinsic proteins
miRNAs	microRNAs
ml	millilitre
mM	millimolar
mm	millimeter
mmol	millimole
mRNA	messenger ribonucleic acid
mV	millivolt
NAC	nitrogen assimilation control
NADPH	nicotinamide adenine dinucleotide phosphate-oxidase
NAM	no apical meristem
NBT	nitroblue tetrazolium
NCBI	national center for biotechnology information
ng	nanogram
nm	nanometer

nmol	nanomole
nt	nucleotides
O ₂ ^{·-}	superoxide radical
OD	optical density
OH [·]	hydroxyl radical
ORF	open reading frame
p	probability
PAL	phenylalanine ammonia-lyase
PCI	phenol chloroform isoamylalcohol
PCR	polymerase chain reaction
pfu	plaque-forming unit
pg	pico gram
PIP	plasma membrane intrinsic protein
pmol	picomole
POD	polyphenol oxidase
POP7	performance optimized polymer 7
POX	peroxidase
PR	pathogen related
psi	pound per square inch
PVP	polyvinylpyrrolidone
QACs	quaternary ammonium compounds
QV	quality value
RACE	rapid amplification of complementary deoxyribonucleic acid ends
RAPD	random amplification of polymorphic DNA
RFLPs	restriction fragment length polymorphisms
RING	really interesting new gene
RISC	RNA-induced silencing complex
RNA	ribonucleic acid
RNase	ribonuclease
ROS	reactive oxygen species
rpm	revolution per minute
rRNA	ribosomal RNA
RS	reducing sugar
RT-PCR	reverse transcriptase-PCR

RWC	relative water content
S	seconds
SAGE	serial analysis of gene expression
SA-PMPs	streptavidin-paramagnetic particles
SCF	skp, cullin & f-box
SDS	sodium dodecyl-sulphate
siRNAs	small interfering RNAs
SMART	switching mechanism at 5' end of RNA template
SOC	super optimal broth with catabolic repressor
SOD	superoxide dismutase
SOS	salt overly sensitive
ss cDNAs	single-strand complementary deoxyribonucleic acids
SSC	saline-sodium citrate
SSH	suppression subtractive hybridisation
SSR	simple sequence repeat
STMS	sequence tag microsatellite site
TAE	tris-acetate- ethylenediaminetetraacetate
TAIR	the <i>Arabidopsis</i> information resource
TBA	thiobarbituric acid
TC	tentative consensus
TCA	trichloroacetic acid
TE	tris-hydrochloric acid and ethylenediaminetetraacetate
TEM	transmission electron microscope
TIF	transcription initiation factor
Tris	tris (hydroxymethyl) amino methane
Tris-HCl	tris (hydroxymethyl) amino methane-hydrochloric acid
TSS	total soluble sugar
TV	tocklai variety
TW	turgid weight
u	unit
ub	ubiquitin
UDL	unigene of drought stressed leaves
UEST	unique expressed sequence tags of drought stressed roots
UESTM	unique expressed sequence tags markers

UN	united nations
UPASI	united planters' association of southern India
US	united states
USL	unigenes of standard leaves
USR	unigenes of standard roots
USSR	union of soviet socialist republics
UV	ultraviolet
UV-VIS	ultraviolet-visible
UWL	unigenes of winter dormancy stressed leaves
v	version
V	voltage
v/v	volume by volume
vol	volume
W	watt
WU-BLAST	washington university-basic local alignment search tool
w/v	weight by volume
x-gal	5-bromo-4-chloro-3-indolyl-beta-D-galacto-pyranoside