

**Supplementary Table:** Brief details of best promising hits obtained through gene ontology for ESTs having SSR which were categorized into biological process, cellular component and molecular function.

Serial no.	Biological Process	Cellular Component	Molecular Function
SYMS-29	GO:0006281 DNA repair GO:0009616 virus induced gene silencing GO:0010050 vegetative phase change GO:0006446 regulation of translational initiation	GO:0005634 nucleus GO:0005840 ribosome	GO:0003743 translation initiation factor activity GO:0017005 3'-tyrosyl-DNA phosphodiesterase activity
SYMS-32	GO:0030042 actin filament depolymerization	GO:0005737 cytoplasm GO:0015629 actin cytoskeleton	GO:0003779 actin binding
SYMS-33		GO:0005886 plasma membrane	
SYMS-36	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-37,38	GO:0016070 RNA metabolic process GO:0006446 regulation of translational initiation	GO:0005634 nucleus GO:0005840 ribosome	GO:0005525 GTP binding GO:0003743 translation initiation factor activity
SYMS-39	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-40	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-41	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic		GO:0008565 protein transporter activity

	reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		
SYMS-44	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-45	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-46			GO:0046983 protein dimerization activity
SYMS-49	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-51	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-52	GO:0015991 ATP hydrolysis coupled proton transport	GO:0016023 cytoplasmic membrane-bounded vesicle GO:0005886 plasma membrane GO:0033179 proton-transporting V-type ATPase, V0 domain GO:0005774 vacuolar membrane GO:0016021 integral to membrane	GO:0015078 hydrogen ion transmembrane transporter activity

SYMS-53	GO:0006355 regulation of transcription, DNA-dependent	GO:0005634 nucleus GO:0005667 transcription factor complex	GO:0003700 sequence-specific DNA binding transcription factor activity GO:0043565 sequence-specific DNA binding
SYMS-55	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-56	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-57	GO:0055114 oxidation-reduction process GO:0006281 DNA repair GO:0060151 peroxisome localization GO:0051301 cell division GO:0007067 mitosis GO:0051646 mitochondrion localization GO:0051645 Golgi localization GO:0030048 actin filament-based movement	GO:0005815 microtubule organizing center GO:0005737 cytoplasm GO:0005886 plasma membrane	GO:0003676 nucleic acid binding GO:0005509 calcium ion binding GO:0008026 ATP-dependent helicase activity GO:0005524 ATP binding GO:0032440 2-alkenal reductase [NAD(P)] activity
SYMS-58	GO:0048573 photoperiodism, flowering GO:0007067 mitosis GO:0006950 response to stress		GO:0003677 DNA binding GO:0008270 zinc ion binding
SYMS-59	GO:0071786 endoplasmic reticulum tubular network organization	GO:0005773 vacuole GO:0071782 endoplasmic reticulum tubular network GO:0009506 plasmodesma GO:0005886 plasma membrane GO:0071458 integral to cytosolic side of endoplasmic reticulum membrane	
SYMS-60	GO:0034968 histone lysine methylation GO:0009909 regulation of flower development GO:0009640 photomorphogenesis GO:0009220 pyrimidine ribonucleotide biosynthetic process GO:0010388 cullin deneddylation GO:0000085 G2 phase of mitotic cell cycle	GO:0005829 cytosol GO:0009506 plasmodesma	GO:0004812 aminoacyl-tRNA ligase activity GO:0000049 tRNA binding

	GO:0006418 tRNA aminoacylation for protein translation		
SYMS-61	GO:0030042 actin filament depolymerization GO:0016049 cell growth GO:0006623 protein targeting to vacuole GO:0042742 defense response to bacterium GO:0000902 cell morphogenesis GO:0009870 defense response signaling pathway, resistance gene-dependent GO:0048193 Golgi vesicle transport	GO:0015629 actin cytoskeleton GO:0009507 chloroplast GO:0005634 nucleus GO:0005886 plasma membrane	GO:0003779 actin binding
SYMS-62	GO:0006116 NADH oxidation GO:0000947 amino acid catabolic process to alcohol via Ehrlich pathway GO:0043458 ethanol biosynthetic process involved in glucose fermentation to ethanol GO:0006090 pyruvate metabolic process	GO:0005739 mitochondrion GO:0005634 nucleus	GO:0008270 zinc ion binding GO:0019170 methylglyoxal reductase (NADH-dependent) activity GO:0004022 alcohol dehydrogenase (NAD) activity
SYMS-63	GO:0006629 lipid metabolic process		
SYMS-64	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-66	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-67	GO:0001510 RNA methylation GO:0009220 pyrimidine ribonucleotide biosynthetic process	GO:0005829 cytosol GO:0009507 chloroplast GO:0005773 vacuole GO:0005634 nucleus	GO:0005515 protein binding
SYMS-68	GO:0006511 ubiquitin-dependent protein catabolic process GO:0009910 negative regulation of flower development GO:0033523 histone H2B ubiquitination GO:0009650 UV protection GO:0009965 leaf morphogenesis		GO:0004842 ubiquitin-protein ligase activity

	GO:0010228 vegetative to reproductive phase transition of meristem		
SYMS-69	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-71	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-72	GO:0030042 actin filament depolymerization GO:0016049 cell growth GO:0006623 protein targeting to vacuole GO:0042742 defense response to bacterium GO:0000902 cell morphogenesis GO:0009870 defense response signaling pathway, resistance gene-dependent GO:0048193 Golgi vesicle transport	GO:0015629 actin cytoskeleton GO:0009507 chloroplast GO:0005634 nucleus GO:0005886 plasma membrane	GO:0003779 actin binding
SYMS-73	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-74	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-75	GO:0009793 embryo development ending in seed dormancy	GO:0005773 vacuole GO:0005618 cell wall	GO:0016818 hydrolase activity, acting on acid anhydrides, in phosphorus-containing anhydrides

	GO:0009740 gibberellic acid mediated signaling pathway GO:0016570 histone modification GO:0006355 regulation of transcription, DNA-dependent GO:0009407 toxin catabolic process GO:0048449 floral organ formation GO:0043090 amino acid import GO:0009965 leaf morphogenesis GO:0010265 SCF complex assembly GO:0016567 protein ubiquitination GO:0006486 protein glycosylation GO:0009845 seed germination GO:0006888 ER to Golgi vesicle-mediated transport GO:0046686 response to cadmium ion GO:0031146 SCF-dependent proteasomal ubiquitin-dependent protein catabolic process GO:0009737 response to abscisic acid stimulus GO:0009909 regulation of flower development GO:0010162 seed dormancy	GO:0005794 Golgi apparatus GO:0005829 cytosol GO:0019005 SCF ubiquitin ligase complex GO:0005635 nuclear envelope GO:0009570 chloroplast stroma GO:0009506 plasmodesma GO:0005886 plasma membrane GO:0005739 mitochondrion	GO:0019904 protein domain specific binding GO:0005524 ATP binding GO:0045309 protein phosphorylated amino acid binding
SYMS-76	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-77,78		GO:0016023 cytoplasmic membrane-bounded vesicle GO:0005783 endoplasmic reticulum	
SYMS-79	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-80	GO:0051788 response to misfolded protein GO:0006635 fatty acid beta-oxidation GO:0043161 proteasomal ubiquitin-dependent protein catabolic process GO:0016579 protein deubiquitination	GO:0005737 cytoplasm GO:0005886 plasma membrane GO:0005634 nucleus	GO:0004842 ubiquitin-protein ligase activity

	GO:0016558 protein import into peroxisome matrix GO:0051510 regulation of unidimensional cell growth GO:0048193 Golgi vesicle transport GO:0042023 DNA endoreduplication GO:0016567 protein ubiquitination GO:0006301 postreplication repair GO:0043248 proteasome assembly		
SYMS-81	GO:0015031 protein transport GO:0009627 systemic acquired resistance GO:0034976 response to endoplasmic reticulum stress		GO:0008565 protein transporter activity
SYMS-82	GO:0009631 cold acclimation	GO:0005829 cytosol GO:0005634 nucleus	GO:0003723 RNA binding GO:0000166 nucleotide binding GO:0008270 zinc ion binding
SYMS-83	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-84	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		GO:0008565 protein transporter activity
SYMS-85	GO:0006301 postreplication repair GO:0006850 mitochondrial pyruvate transport GO:0009060 aerobic respiration GO:0006096 glycolysis GO:0046686 response to cadmium ion	GO:0005743 mitochondrial inner membrane GO:0005774 vacuolar membrane GO:0009507 chloroplast GO:0005886 plasma membrane	
SYMS-86	GO:0006281 DNA repair GO:0009616 virus induced gene silencing GO:0010050 vegetative phase change GO:0006446 regulation of translational initiation	GO:0005634 nucleus GO:0005840 ribosome	GO:0003743 translation initiation factor activity GO:0017005 3'-tyrosyl-DNA phosphodiesterase activity
SYMS-87	GO:0009627 systemic acquired resistance GO:0006457 protein folding GO:0009644 response to high light intensity GO:0034976 response to endoplasmic		GO:0008565 protein transporter activity

	reticulum stress GO:0042542 response to hydrogen peroxide GO:0009408 response to heat GO:0015031 protein transport		
SYMS-88	GO:0043447 alkane biosynthetic process GO:0022900 electron transport chain GO:0042742 defense response to bacterium GO:0019745 pentacyclic triterpenoid biosynthetic process GO:0016126 sterol biosynthetic process	GO:0016021 integral to membrane GO:0005789 endoplasmic reticulum membrane	GO:0046872 metal ion binding GO:0020037 heme binding
SYMS-89	GO:0006355 regulation of transcription, DNA-dependent		GO:0003677 DNA binding