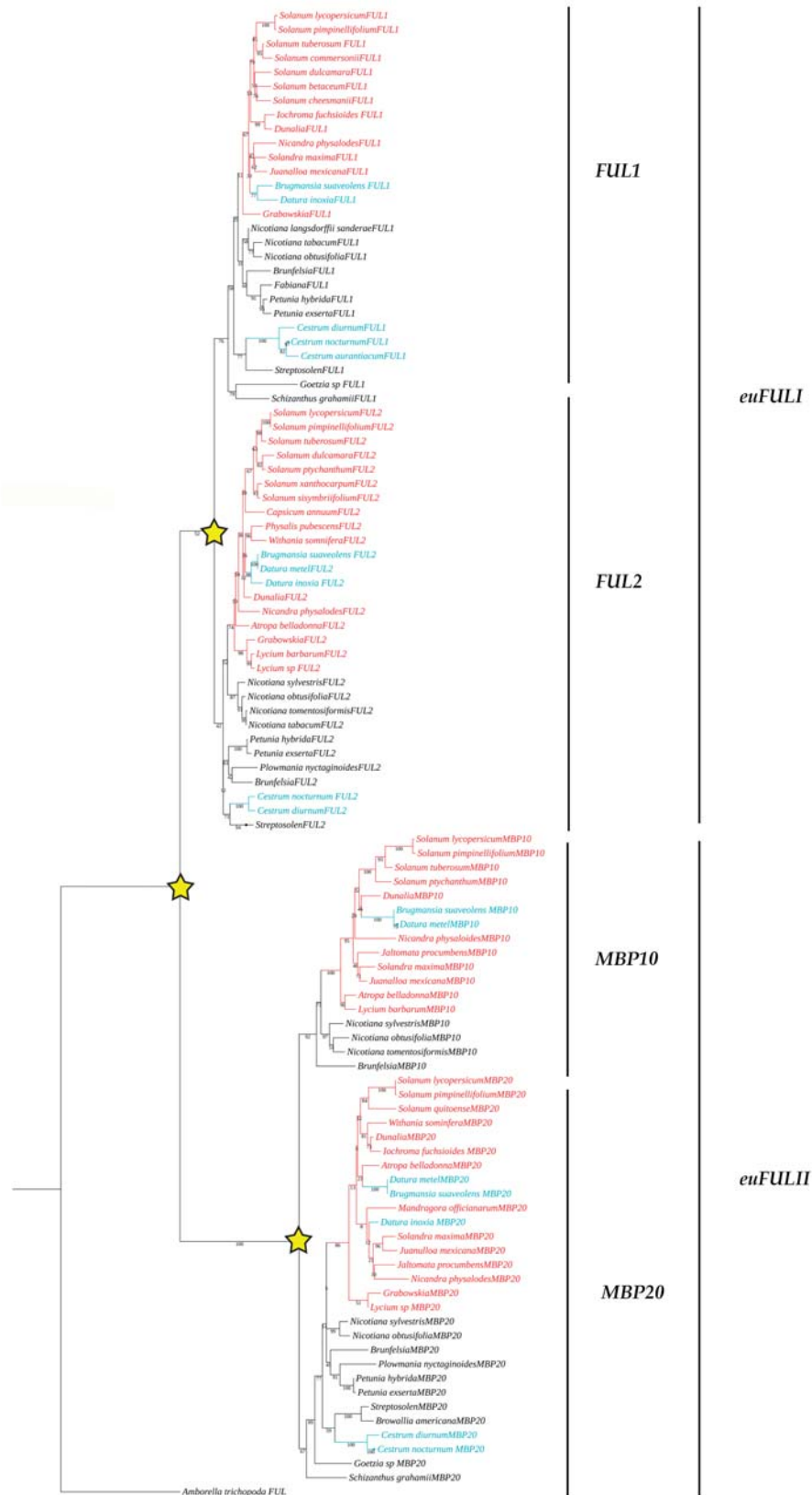


SUPPLEMENTARY MATERIAL

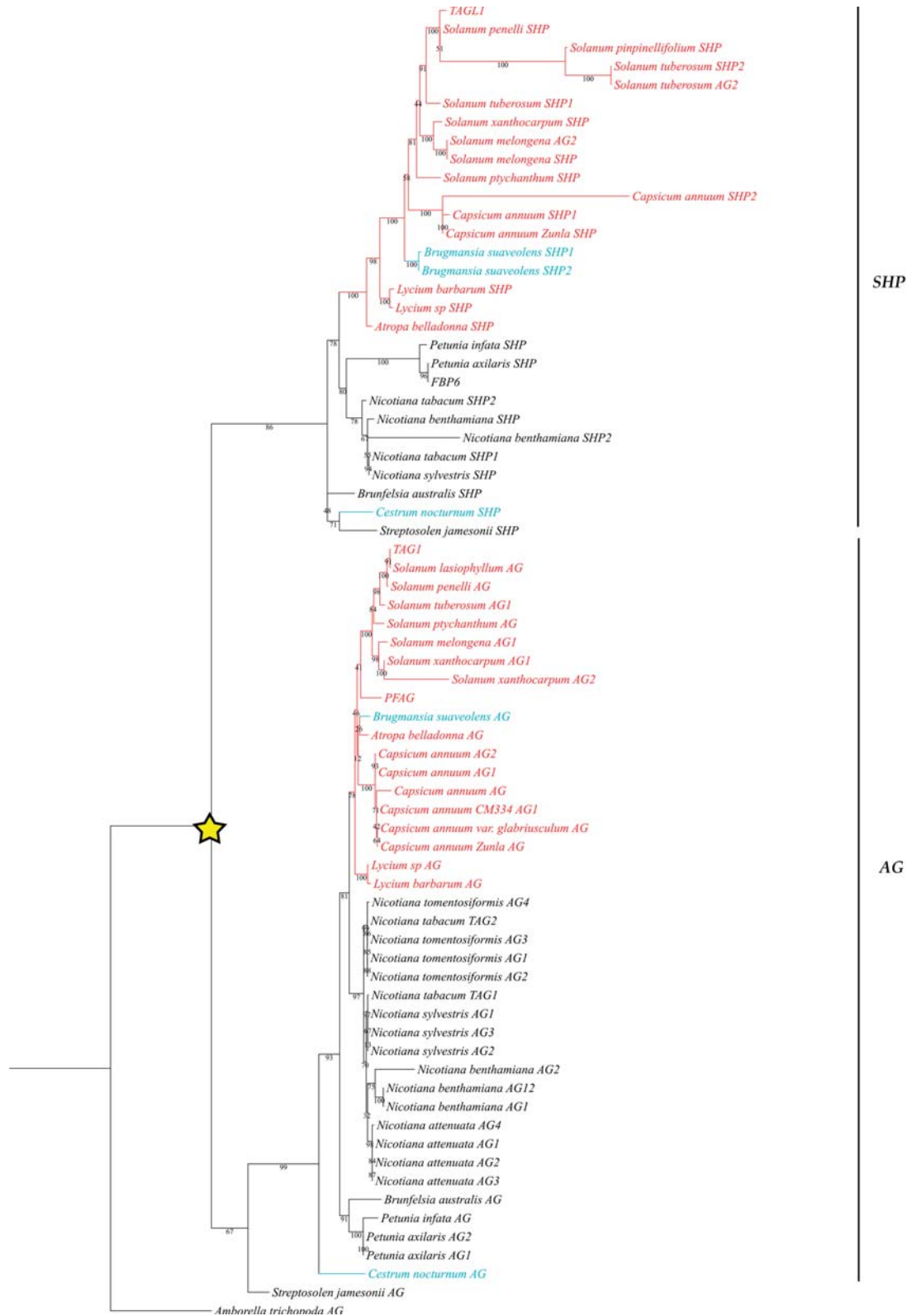
corresponding to:

**Anatomical and genetic bases underlying convergent
evolution of fleshy and dry dehiscent fruits
in *Cestrum* and *Brugmansia* (Solanaceae)**

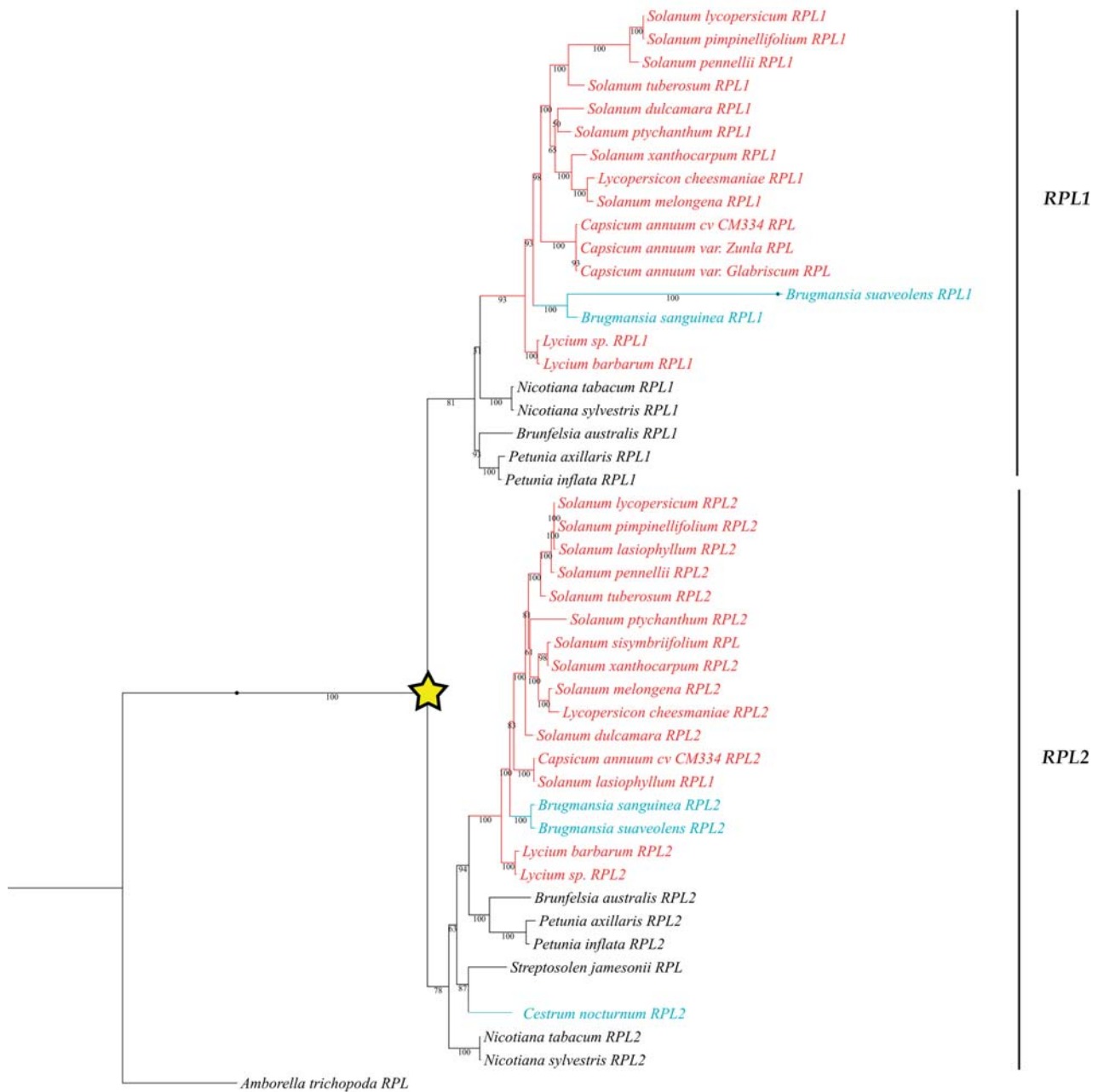
NATALÍ HERNÁNDEZ-CIRO and NATALIA PABÓN-MORA



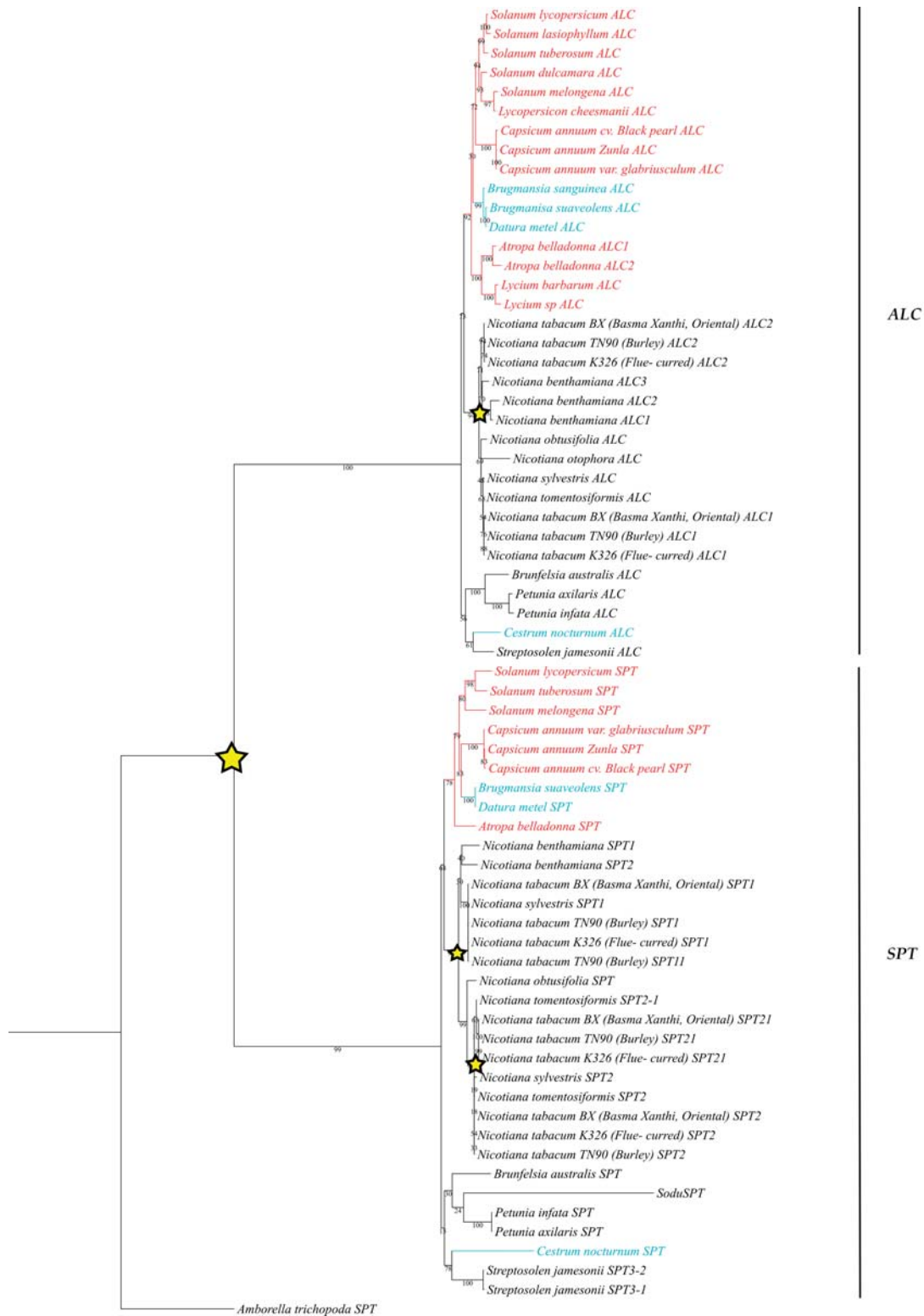
Suppl. Fig. S1. Maximum likelihood tree of *FRUITFULL* genes in Solanaceae. Outgroup used corresponds to the *Amborella trichopoda FUL* (*AmtrFUL*). Duplication events are labelled with stars. Genes belonging to species with dry dehiscent fruits are labeled in black, those belonging to species with fleshy fruits are labeled in red, and those belonging to the target species *Cestrum nocturnum*, indicating an independent origin of fleshy fruits and species from the Daturae tribe (*Brugmansia* and *Datura*), indicating phylogenetic reversals to dry dehiscent fruits, are labeled in light blue. Branch numbers indicate BS supports.



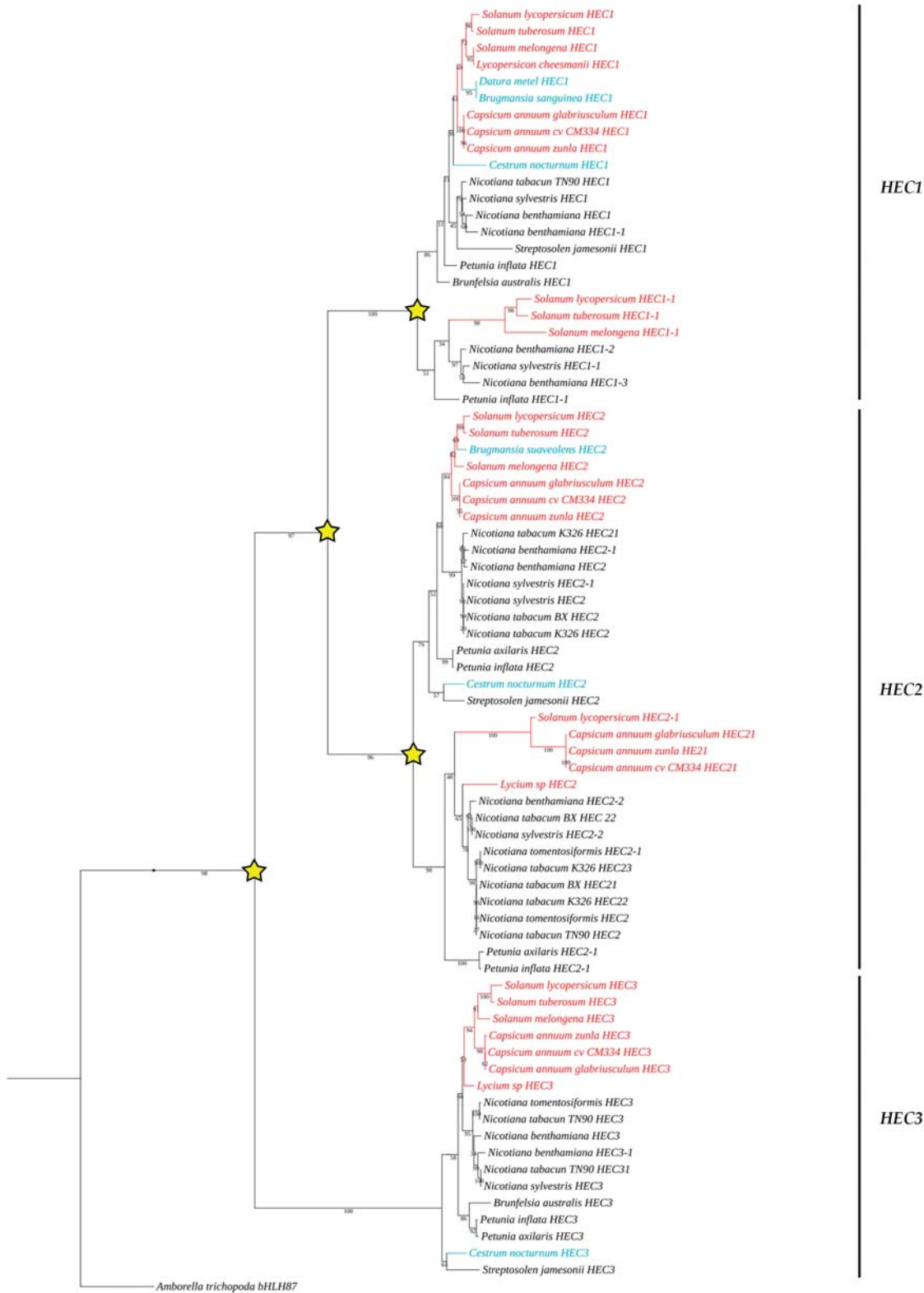
Suppl. Fig. S2. Maximum likelihood tree of AGAMOUS/SHATTERPROOF genes in Solanaceae. Outgroup used corresponds to the *Amborella trichopoda* AG (*AmtrAG*). Duplication events are labelled with stars. Colors follow the conventions specified in the Suppl. Fig. S1. legend. Branch numbers indicate BS supports.



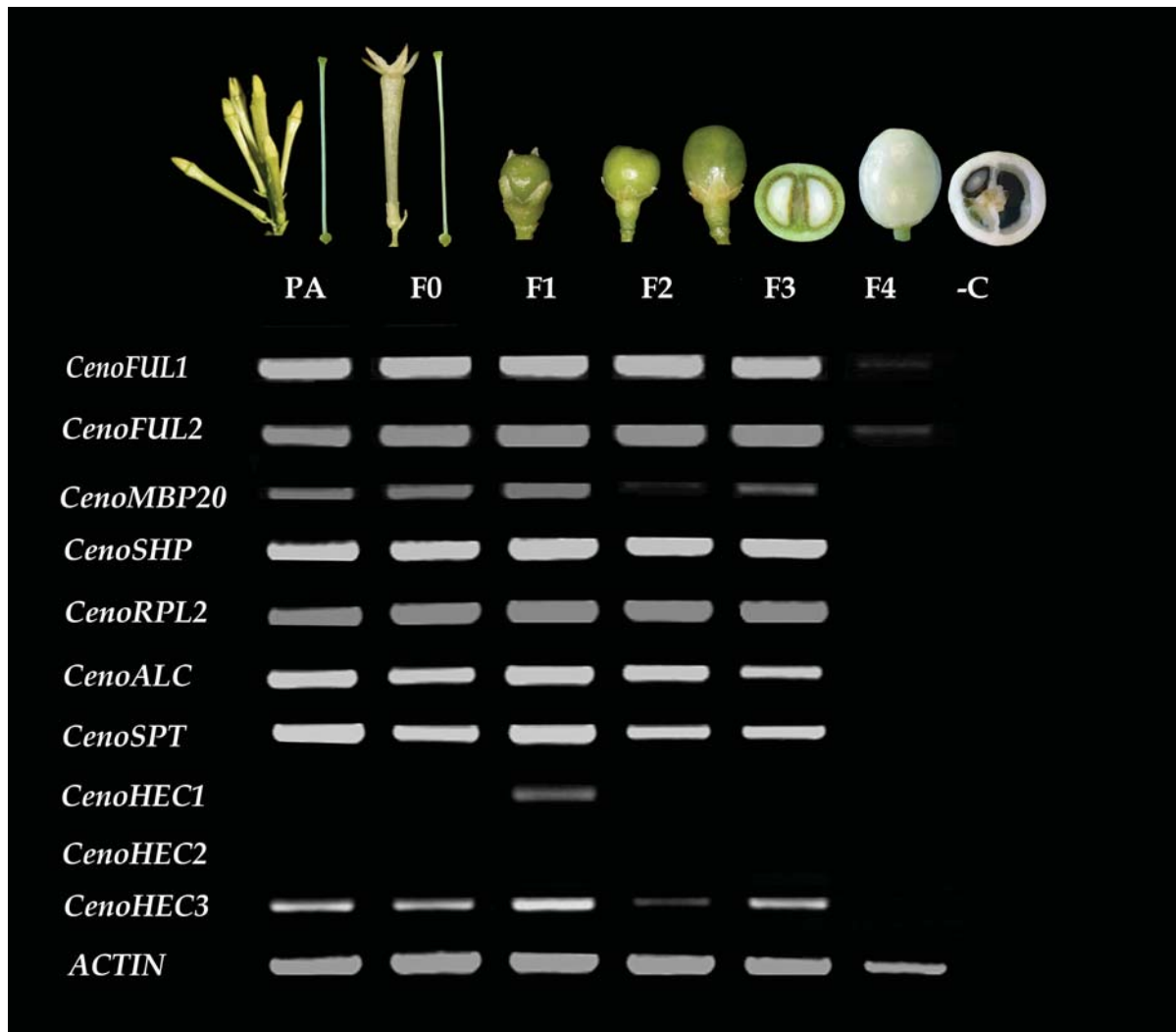
Suppl. Fig. S3. Maximum likelihood tree of *REPLUMLESS* genes in Solanaceae. Outgroup used corresponds to the *Amborella trichopoda RPL* (*AmtrRPL*). Duplication events are labelled with stars. Colors follow the conventions specified in the Suppl. Fig. S1. legend. Branch numbers indicate BS supports.



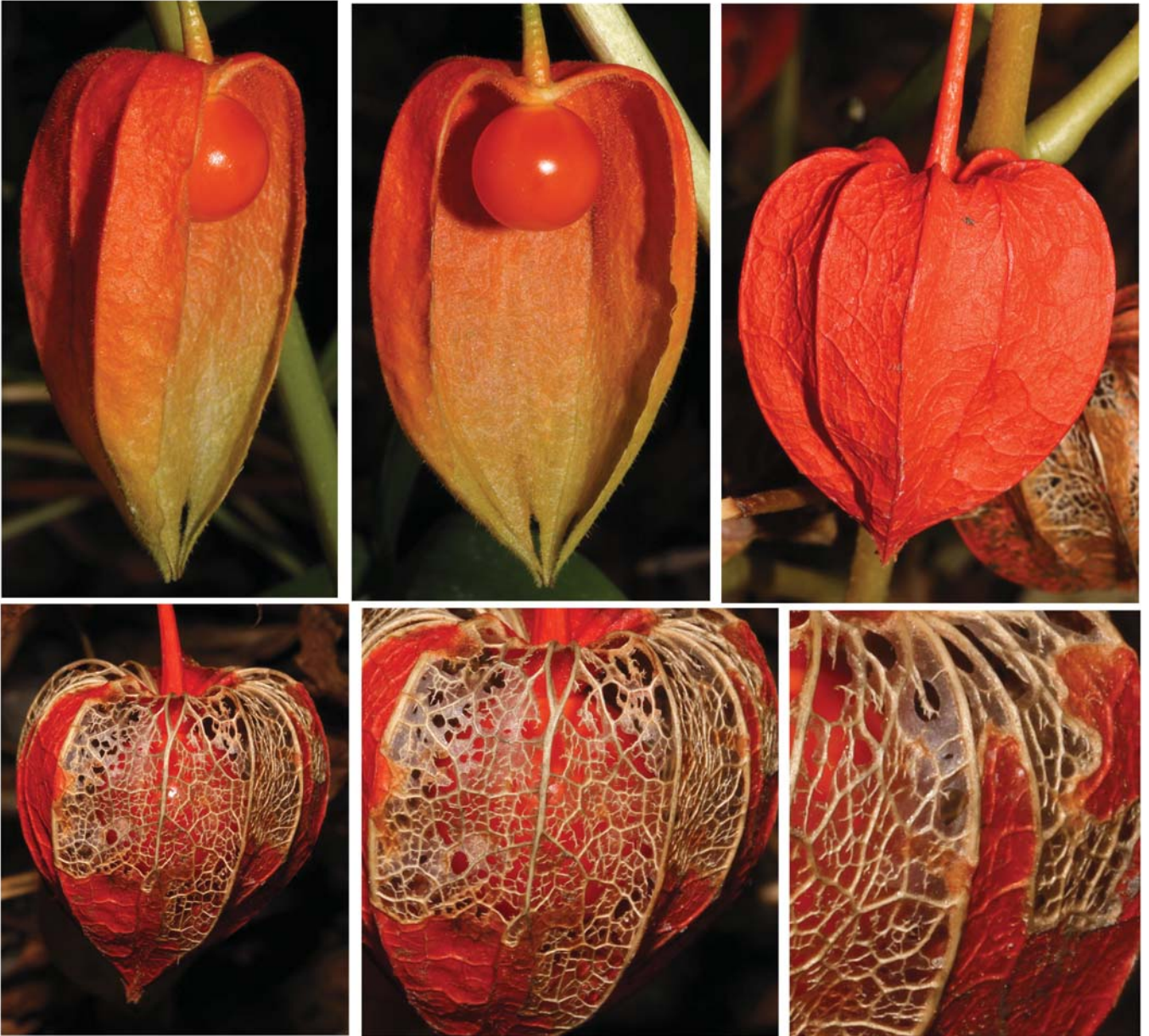
Suppl. Fig. S4. Maximum likelihood tree of ALCATRAZ/SPATULA genes in Solanaceae. Outgroup used corresponds to *Amborella trichopoda* SPATULA (*AmtrSPT*). Duplication events are labelled with stars. Colors follow the conventions specified in the Suppl. Fig. S1. legend. Branch numbers indicate BS supports.



Suppl. Fig. S5. Maximum likelihood tree of *HECATE/INDEHISCENT* genes in angiosperms. Outgroup used corresponds to *Amborella trichopoda bHLH87* (*AmtrbHLH87*). Duplication events are labelled with stars. Colors follow the conventions specified in the Suppl. Fig. S1. legend. Branch numbers indicate BS supports.



Suppl. Fig. S6. Expression analyses of the fruit GRN genes in *Cestrum nocturnum* after 35 amplification cycles. PA, ovary in preanthesis; F, fruit developmental stages; -C indicates the amplification reaction loaded without cDNA.

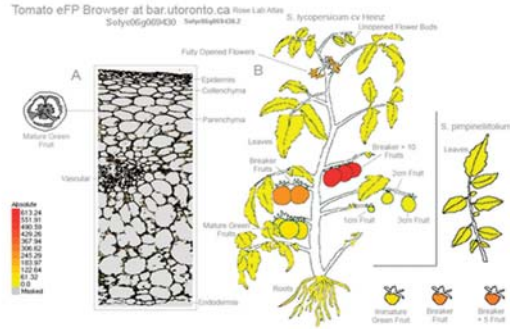


Suppl. Fig. S7. Sepal development and maturation in *Alkekengi officinarum* showing parenchyma degradation in between the primary and secondary vascular traces.

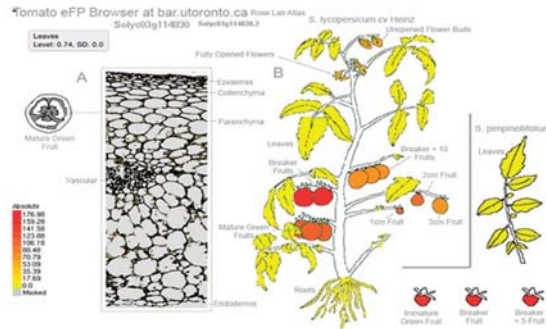
Solanum lycopersicum

Nicotiana benthamiana

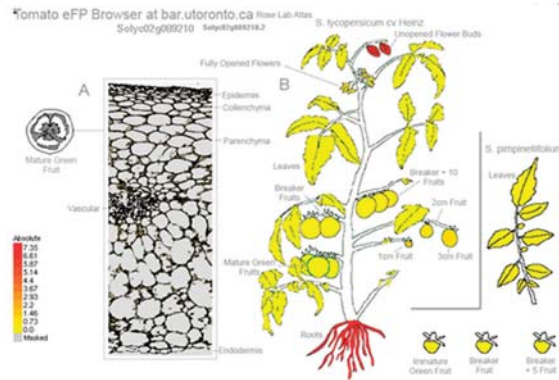
FUL1 (euFUL1)



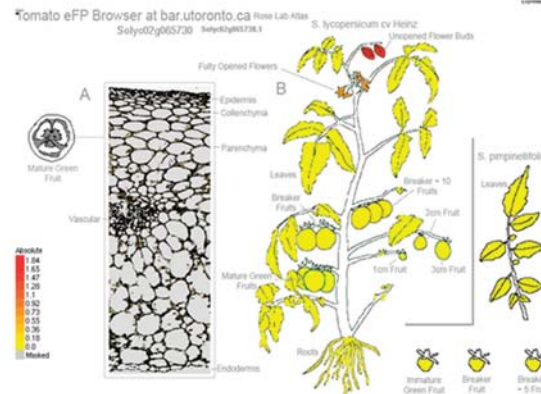
FUL2 (euFUL1)



MBP20 (euFULII)



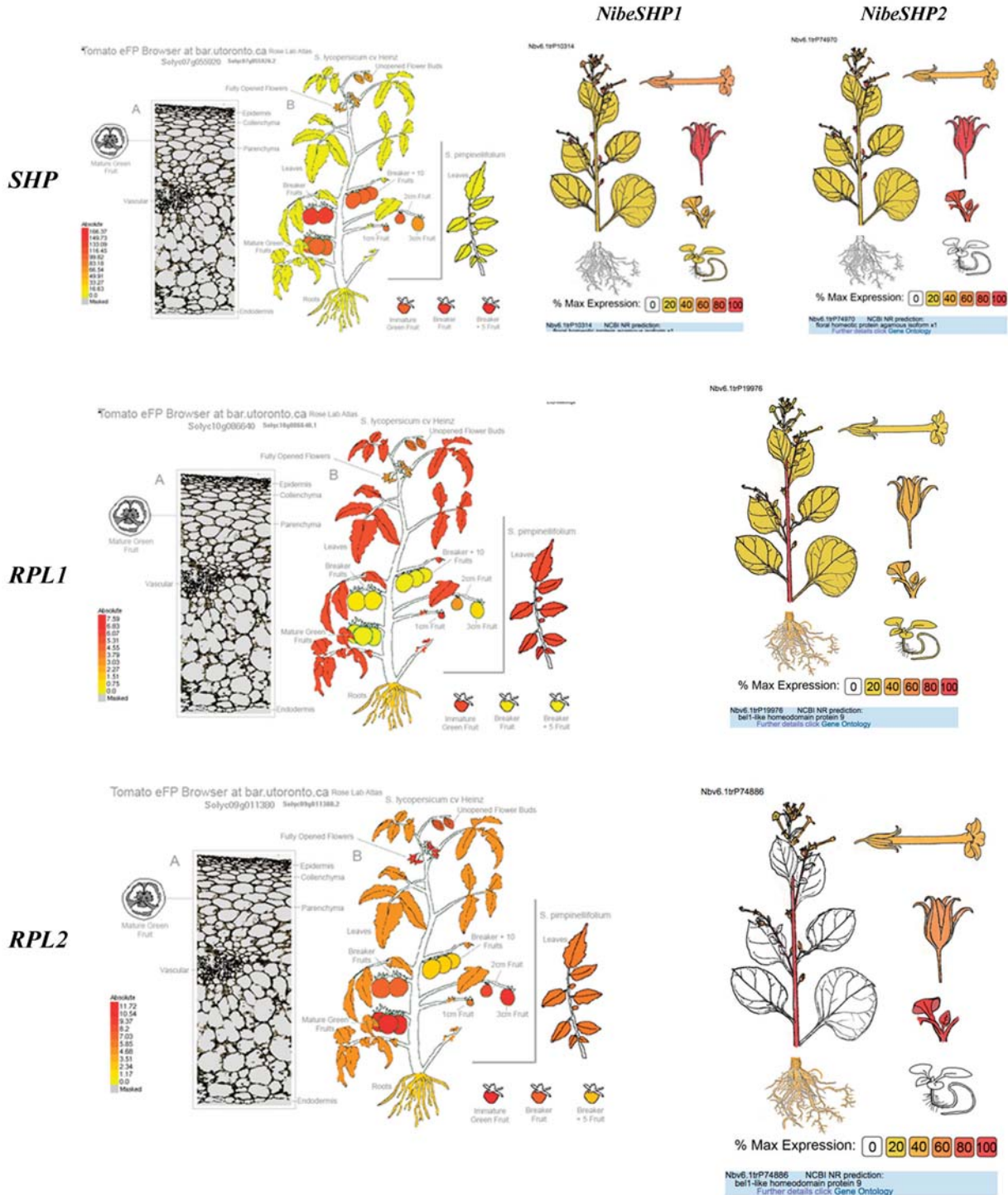
MBP10 (euFULII)



Suppl. Fig. S8. Expression profiles of *FRUITFULL* genes in *Solanum lycopersicum*, from eFP Browser (http://bar.utoronto.ca/efp2/ Tomato/ Tomato_eFPBrowser2.html), and *Nicotiana benthamiana*, from the Gene Expression ATLAS (<http://sefapps02.qut.edu.au/atlas/tREX6.php>).

Solanum lycopersicum

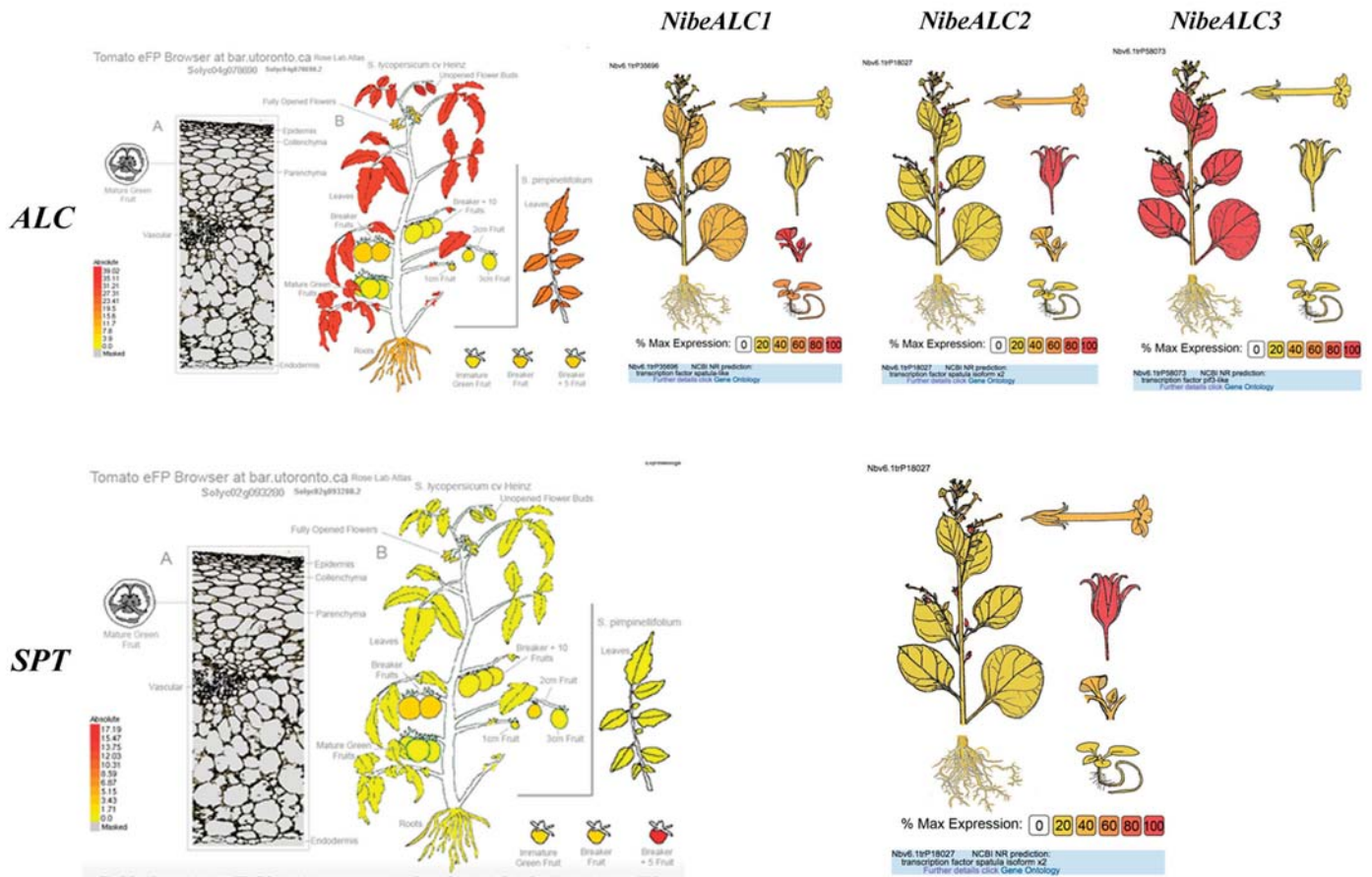
Nicotiana benthamiana



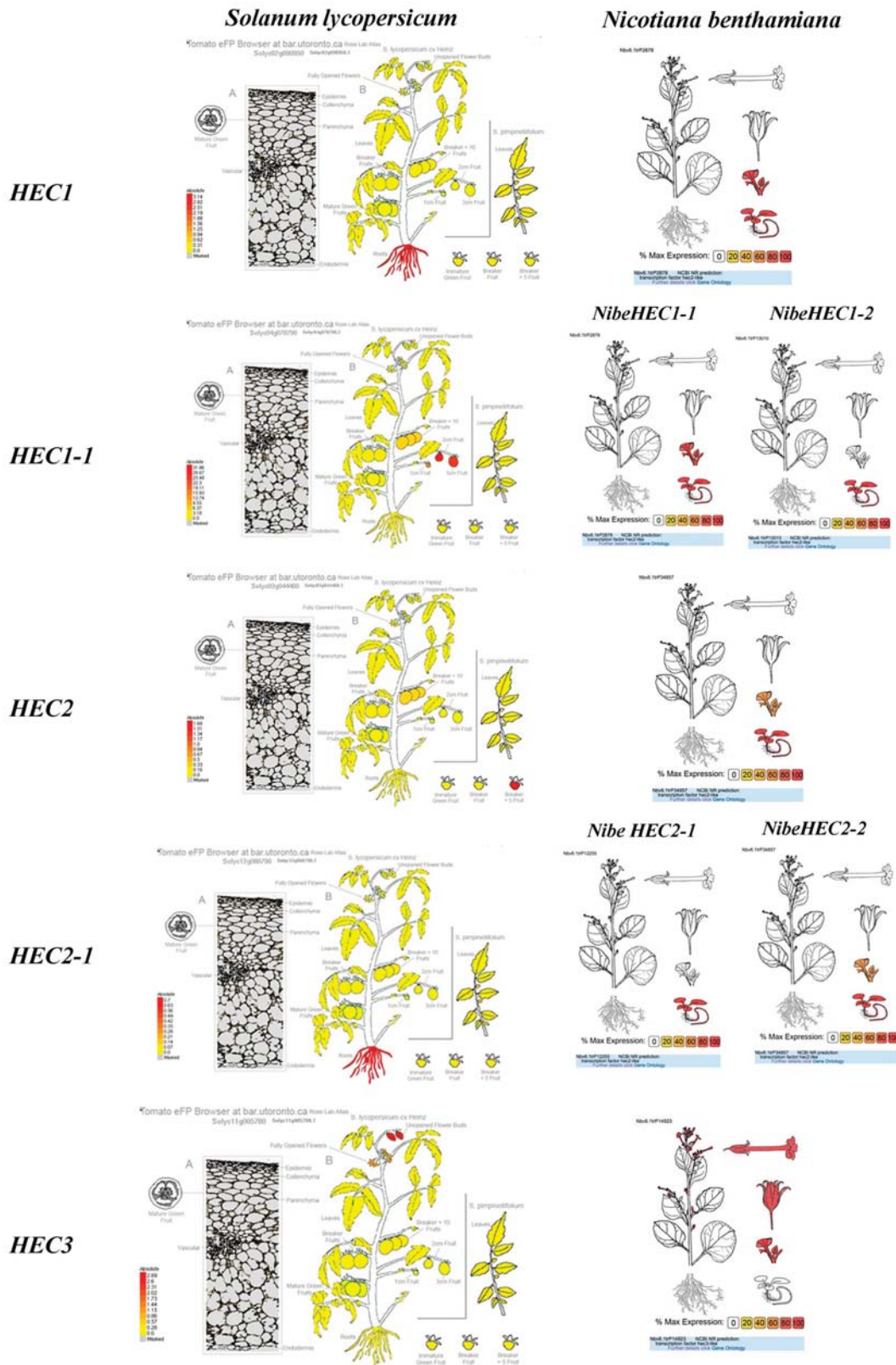
Suppl. Fig. S9. Expression profiles of *SHATTERPROOF* and *REPLUMLESS* genes in *Solanum lycopersicum*, from eFP Browser (http://bar.utoronto.ca/efp2/ Tomato/ Tomato_eFPBrowser2.html), and *Nicotiana benthamiana*, from the Gene Expression ATLAS (<http://sefapps02.qut.edu.au/atlas/tREX6.php>).

Solanum lycopersicum

Nicotiana benthamiana



Suppl. Fig. S10. Expression profiles of *ALCATRAZ*/*SPATULA* genes in *Solanum lycopersicum*, from eFP Browser (http://bar.utoronto.ca/efp2/ Tomato/ Tomato_eFPBrowser2.html), and *Nicotiana benthamiana*, from the Gene Expression ATLAS (<http://sefapps02.qut.edu.au/atlas/tREX6.php>).



Suppl. Fig. S11. Expression profiles of *HECATE1/2/3* genes in *Solanum lycopersicum*, from eFP Browser (http://bar.utoronto.ca/efp2/ Tomato/ Tomato_eFPBrowser2.html), and *Nicotiana benthamiana*, from the Gene Expression ATLAS (<http://sefapps02.qut.edu.au/atlas/tREX6.php>).

Table S1. Accession numbers for all sequences used in the main figures of this study. Databases: Phyto: Phytozome at <https://Phyto.jgi.doe.gov/pz/portal.html> ; OneKP: http://www.onekp.com/public_data.html; SGN: Sol Genomics Network; UdeA: Universidad de Antioquia.

<i>ALCATRAZ/SPATULA genes</i>				
Gene name	Species	Family	Accession Number	Database
<i>AmtrSPT</i>	<i>Amborella trichopoda</i>	Amborellaceae	evm_27.model.AmTr_v1.0_scaf fold00046.26	Phyto
<i>AtbeALC1</i>	<i>Atropa belladonna</i>	Solanaceae	BOLZ-2009637	OneKp
<i>AtbeALC2</i>	<i>Atropa belladonna</i>	Solanaceae	BOLZ-2009636	OneKp
<i>AtbeSPT</i>	<i>Atropa belladonna</i>	Solanaceae	BOLZ-2039914	OneKp
<i>BrauALC</i>	<i>Brumfelsia australis</i>	Solanaceae	TRINITY_DN25935_c0_g1_i1	UdeA
<i>BrauSPT</i>	<i>Brumfelsia australis</i>	Solanaceae	TRINITY_DN25934_c3_g1_i1	UdeA
<i>BrsuALC</i>	<i>Brugmansia suaveolens</i>	Solanaceae	TRINITY_DN18572_c0_g1_i2	UdeA
<i>BrsuSPT</i>	<i>Brugmansia suaveolens</i>	Solanaceae	TRINITY_DN15730_c0_g1_i3	UdeA
<i>CaanBpALC</i>	<i>Capsicum annuum cv. Black pearl</i>	Solanaceae	<i>Unassigned code</i>	UdeA
<i>CaanGlALC</i>	<i>Capsicum annuum var. glabriusculum</i>	Solanaceae	Capang04g000533	SGN
<i>CaanGlSPT</i>	<i>Capsicum annuum var. glabriusculum</i>	Solanaceae	Capang02g002787	SGN
<i>CaanBpSPT</i>	<i>Capsicum annuum cv. Black pearl</i>	Solanaceae	<i>Unassigned code</i>	UdeA
<i>CaanZuALC</i>	<i>Capsicum annuum Zunla</i>	Solanaceae	Capana04g000590	SGN
<i>CaanZuSPT</i>	<i>Capsicum annuum Zunla</i>	Solanaceae	Capana02g003079	SGN
<i>CenoALC</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN23456_c0_g1_i1	UdeA
<i>CenoSPT</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN28823_c1_g2_i1	UdeA
<i>DameALC</i>	<i>Datura metel</i>	Solanaceae	JNVS-2048363	OneKp
<i>DameSPT</i>	<i>Datura metel</i>	Solanaceae	JNVS-2035866	OneKp
<i>LychALC</i>	<i>Lycopersicon cheesmanii</i>	Solanaceae	UGJI-2021566	OneKp
<i>LyspALC</i>	<i>Lycium sp</i>	Solanaceae	OSMU-2078921	OneKp
<i>LybaALC</i>	<i>Lycium barbarum</i>	Solanaceae	LWCK-2014040	OneKp
<i>NibeALC1</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf04995g00002.1	SGN
<i>NibeALC3</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf12132g00007.1	SGN
<i>NibeALC2</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf00868g07004.1	SGN
<i>NibeSPT1</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf01802g02017.1	SGN
<i>NibeSPT2</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf04003g05003.1	SGN
<i>NiobALC</i>	<i>Nicotiana obtusifolia</i>	Solanaceae	<i>Unassigned code</i>	UdeA
<i>NiobSPT</i>	<i>Nicotiana obtusifolia</i>	Solanaceae	<i>Unassigned code</i>	UdeA
<i>NiotALC</i>	<i>Nicotiana otophora</i>	Solanaceae	Noto_AWOL01S0531733.1	SGN
<i>NsylALC</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_74493_cds	SGN

<i>NsylSPT1</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_20420_cds	SGN
<i>NsylSPT2</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_20421_cds	SGN
<i>NitaBxALC2</i>	<i>Nicotiana tabacum BX (Basma Xanthi, Oriental)</i>	Solanaceae	mRNA_57026_cds	SGN
<i>NitaBxALC1</i>	<i>Nicotiana tabacum BX (Basma Xanthi, Oriental)</i>	Solanaceae	mRNA_89420_cds	SGN
<i>NitaBxSPT2</i>	<i>Nicotiana tabacum BX (Basma Xanthi, Oriental)</i>	Solanaceae	mRNA_145507_cds	SGN
<i>NitaBxSPT1</i>	<i>Nicotiana tabacum BX (Basma Xanthi, Oriental)</i>	Solanaceae	mRNA_145508_cds	SGN
<i>NitaBxSPT3</i>	<i>Nicotiana tabacum BX (Basma Xanthi, Oriental)</i>	Solanaceae	mRNA_124703_cds	SGN
<i>NitaKALC1</i>	<i>Nicotiana tabacum K326 (Flue- curred)</i>	Solanaceae	mRNA_62305_cds	SGN
<i>NitaKALC2</i>	<i>Nicotiana tabacum K326 (Flue- curred)</i>	Solanaceae	mRNA_57185_cds	SGN
<i>NitaKSPT2</i>	<i>Nicotiana tabacum K326 (Flue- curred)</i>	Solanaceae	mRNA_1788_cds	SGN
<i>NitaKSPT3</i>	<i>Nicotiana tabacum K326 (Flue- curred)</i>	Solanaceae	mRNA_123690_cds	SGN
<i>NitaKSPT1</i>	<i>Nicotiana tabacum K326 (Flue- curred)</i>	Solanaceae	mRNA_1787_cds	SGN
<i>NitaTnALC1</i>	<i>Nicotiana tabacum TN90 (Burley)</i>	Solanaceae	mRNA_181946	SGN
<i>NitaTnALC2</i>	<i>Nicotiana tabacum TN90 (Burley)</i>	Solanaceae	mRNA_67992	SGN
<i>NitaTnSPT2</i>	<i>Nicotiana tabacum TN90 (Burley)</i>	Solanaceae	mRNA_5120	SGN
<i>NitaTnSPT1</i>	<i>Nicotiana tabacum TN90 (Burley)</i>	Solanaceae	mRNA_5119	SGN
<i>NitaTnSPT3</i>	<i>Nicotiana tabacum TN90 (Burley)</i>	Solanaceae	mRNA_152209	SGN
<i>NitaTnSPT4</i>	<i>Nicotiana tabacum TN90 (Burley)</i>	Solanaceae	mRNA_152208	SGN
<i>NitoALC</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	mRNA_6688_cds	SGN
<i>NitoSPT1</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	mRNA_26330_cds	SGN
<i>NitoSPT2</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	mRNA_26331_cds	SGN
<i>SoduALC</i>	<i>Solanum dulcamara</i>	Solanaceae	GHLP-2055933	OneKp
<i>SoduSPT</i>	<i>Solanum dulcamara</i>	Solanaceae	GHLP-2034809	OneKp
<i>SolaALC</i>	<i>Solanum lasiophyllum</i>	Solanaceae	DLAI-2016414	OneKp
<i>SlyALC</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc04g078690.2.1	SGN
<i>SlySPT</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc02g093280.2.1	SGN
<i>StjaALC</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN88165_c0_g1_i1	UdeA
<i>StjaSPT1</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN57268_c0_g1_i1	UdeA
<i>StjaSPT2</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN57268_c0_g2_i1	UdeA
<i>StjaSPT3</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN57328_c0_g1_i1	UdeA
<i>StjaSPT4</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN57328_c0_g2_i1	UdeA
<i>StuALC1</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMT400020534	Phyto
<i>StuSPT1</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMT400010253	Phyto
<i>PeaxALC</i>	<i>Petunia axilaris</i>	Solanaceae	Peaxi162Scf00503g00311.1	SGN
<i>PeaxSPT</i>	<i>Petunia axilaris</i>	Solanaceae	Peaxi162Scf00450g00124.1	SGN
<i>PeinALC</i>	<i>Petunia infata</i>	Solanaceae	Peinf101Scf00167g11027.1	SGN

<i>PeinSPT</i>	<i>Petunia infata</i>	Solanaceae	Peinf101Scf00887g01035.1	SGN
<i>SomeALC</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_01029.1	SGN
<i>SomeSPT</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_00029.1_g00003.1	SGN
<i>StuALC</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMT400020534	Phyto
<i>StuSPT</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMT400010253	Phyto
<i>SomeALC</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_01029.1_g00003.1	SGN
<i>AtALC</i>	<i>Arabidopsis thaliana</i>	Brassicaceae	AT5G67110.1	Phyto
<i>AtSPT</i>	<i>Arabidopsis thaliana</i>	Brassicaceae	AT4G36930.1	Phyto
<i>PPERSPT</i>	<i>Prunus persica</i>	Rosaceae	GU181270.1	GenBank
<i>FaSPT</i>	<i>Fragaria (Fragaria x ananassa Duch)</i>	Rosaceae	AY679615.1	GenBank
HECATE/INDEHISCENT genes				
<i>AtHEC1</i>	<i>Arabidopsis thaliana columbia</i>	Brassicaceae	AT5G67060.1	Phyto
<i>AtHEC2</i>	<i>Arabidopsis thaliana columbia</i>	Brassicaceae	AT3G50330.1	Phyto
<i>AtHEC3</i>	<i>Arabidopsis thaliana columbia</i>	Brassicaceae	AT5G09750.1	Phyto
<i>AtIND</i>	<i>Arabidopsis thaliana columbia</i>	Brassicaceae	AT4G00120.1	Phyto
<i>AmtrbHLH87</i>	<i>Amborella trichopoda</i>	Amborellaceae	evm_27.model.AmTr_v1.0_scaf fold00036.88	Phyto
<i>BrauHEC1</i>	<i>Brunfelsia australis</i>	Solanaceae	TRINITY_DN63683_c0_g1_i1	UdeA
<i>BrauHEC3</i>	<i>Brunfelsia australis</i>	Solanaceae	TRINITY_DN39092_c0_g1_i1 / TRINITY_DN49723_c0_g1_i1	UdeA
<i>BrsuHEC2</i>	<i>Brugmansia suaveolens</i>	Solanaceae	TRINITY_DN11677_c0_g1_i1	UdeA
<i>CaanCmHEC1</i>	<i>Capsicum annuum cv CM334</i>	Solanaceae	CA02g14320	SGN
<i>CaanCmHEC2</i>	<i>Capsicum annuum cv CM334</i>	Solanaceae	CA04g18570	SGN
<i>CaanCmHEC2-1</i>	<i>Capsicum annuum cv CM334</i>	Solanaceae	CA12g16720	SGN
<i>CaanCmHEC3</i>	<i>Capsicum annuum cv CM334</i>	Solanaceae	CA12g12200	SGN
<i>CaanGIHEC1</i>	<i>Capsicum annuum glabriusculum</i>	Solanaceae	Capang04g000508	SGN
<i>CaanGIHEC2</i>	<i>Capsicum annuum glabriusculum</i>	Solanaceae	Capang00g005044	SGN
<i>CaanGIHEC2-1</i>	<i>Capsicum annuum glabriusculum</i>	Solanaceae	Capang02g002798	SGN
<i>CaanGIHEC3</i>	<i>Capsicum annuum glabriusculum</i>	Solanaceae	Capang05g001661	SGN
<i>CaanZuHEC1</i>	<i>Capsicum annuum zunla</i>	Solanaceae	Capana04g000560	SGN
<i>CaanZuHEC2</i>	<i>Capsicum annuum zunla</i>	Solanaceae	Capana12g000725	SGN
<i>CaanZuHEC2-1</i>	<i>Capsicum annuum zunla</i>	Solanaceae	Capana02g003089	SGN
<i>CaanZuHEC3</i>	<i>Capsicum annuum zunla</i>	Solanaceae	Capana12g002036	SGN
<i>CenoHEC1</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN56773_c0_g1_i1	UdeA
<i>CenoHEC2</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN52324_c0_g1_i1	UdeA
<i>CenoHEC3a</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN51720_c0_g1_i1	UdeA
<i>CenoHEC3b</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN9705_c0_g1_i1	UdeA
<i>DameHEC1</i>	<i>Datura metel</i>	Solanaceae	JNVS-2028087	OneKP

<i>LychHEC1</i>	<i>Lycopersicon cheesmanii</i>	Solanaceae	UGJI-2070875	OneKP
<i>LyspHEC2</i>	<i>Lycium sp</i>	Solanaceae	OSMU-2025308	OneKP
<i>LyspHEC3</i>	<i>Lycium sp</i>	Solanaceae	OSMU-2053989	OneKP
<i>NibeHEC1</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf23305g01001.1	SGN
<i>NibeHEC1-1</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf06518g02008.1	SGN
<i>NibeHEC1-2</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf00378g03005.1	SGN
<i>NibeHEC1-3</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf02681g01005.1	SGN
<i>NibeHEC2</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf04995g05002.1	SGN
<i>NibeHEC2-1</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf06261g01001.1	SGN
<i>NibeHEC2-2</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf04007g05007.1	SGN
<i>NibeHEC3</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf00446g05004.1	SGN
<i>NibeHEC3-1</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf03882g01003.1	SGN
<i>NsylvHEC1</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_43474	SGN
<i>NsylvHEC1-1</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_38933_cds	SGN
<i>NsylvHEC2</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_38932_cds	SGN
<i>NsylvHEC2-1</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_1417	SGN
<i>NsylvHEC2-2</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_68279	SGN
<i>NsylvHEC3</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_20419	SGN
<i>NitaBxHEC2</i>	<i>Nicotiana tabacum BX</i>	Solanaceae	mRNA_34319_cds	SGN
<i>NitaBxHEC2-1</i>	<i>Nicotiana tabacum BX</i>	Solanaceae	mRNA_76763	SGN
<i>NitaBxHEC2-2</i>	<i>Nicotiana tabacum BX</i>	Solanaceae	mRNA_143639	SGN
<i>NitaKHEC2</i>	<i>Nicotiana tabacum K326</i>	Solanaceae	mRNA_113024_cds	SGN
<i>NitaKHEC2-1</i>	<i>Nicotiana tabacum K326</i>	Solanaceae	mRNA_113025_cds	SGN
<i>NitaKHEC2-2</i>	<i>Nicotiana tabacum K326</i>	Solanaceae	mRNA_62314_cds	SGN
<i>NitaKHEC2-3</i>	<i>Nicotiana tabacum K326</i>	Solanaceae	mRNA_33516_cds	SGN
<i>NitaTnHEC1</i>	<i>Nicotiana tabacum TN90</i>	Solanaceae	mRNA_146533	SGN
<i>NitaTnHEC2</i>	<i>Nicotiana tabacum TN90</i>	Solanaceae	mRNA_16338	SGN
<i>NitaTnHEC3</i>	<i>Nicotiana tabacum TN90</i>	Solanaceae	mRNA_151510	SGN
<i>NitaTnHEC3-1</i>	<i>Nicotiana tabacum TN90</i>	Solanaceae	mRNA_12399	SGN
<i>NitoHEC2</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	mRNA_68030	SGN
<i>NitoHEC2-1</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	mRNA_68029	SGN
<i>NitoHEC3</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	mRNA_48928	SGN
<i>PeaxHEC2</i>	<i>Petunia axilaris</i>	Solanaceae	Peaxi162Scf00458g00320.1	SGN
<i>PeaxHEC2-1</i>	<i>Petunia axilaris</i>	Solanaceae	Peaxi162Scf01073g00009.1	SGN
<i>PeaxHEC3</i>	<i>Petunia axilaris</i>	Solanaceae	Peaxi162Scf00012g00161.1	SGN
<i>PeinHEC1</i>	<i>Petunia inflata</i>	Solanaceae	Peinf101Scf00713g00005.1	SGN
<i>PeinHEC1-1</i>	<i>Petunia inflata</i>	Solanaceae	Peinf101Scf00167g09003.1	SGN

<i>PeinHEC2</i>	<i>Petunia inflata</i>	Solanaceae	Peinf101Scf00475g19014.1	SGN
<i>PeinHEC2-1</i>	<i>Petunia inflata</i>	Solanaceae	Peinf101Scf00811g00011.1	SGN
<i>PeinHEC3</i>	<i>Petunia inflata</i>	Solanaceae	Peinf101Scf00652g02001.1	SGN
<i>SlyHEC1</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc02g090950.1.1	Phyto
<i>SlyHEC1-1</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc04g078790.2.1	Phyto
<i>SlyHEC2</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc03g044460.1.1	Phyto
<i>SlyHEC2-1</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc12g088790.1.1	Phyto
<i>SlyHEC3</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc11g005780.1.1	Phyto
<i>SomeHEC1</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_03422.1_g00002.1	SGN
<i>SomeHEC1-1</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_13814.1_g00002.1	SGN
<i>SomeHEC2</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_09326.1_g00003.1	SGN
<i>SomeHEC3</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_01618.1_g00007.1	SGN
<i>StjaHEC1</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN14891_c0_g2_i1	UdeA
<i>StjaHEC2</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN29940_c0_g1_i1/ TRINITY_DN56310_c0_g1_i1	UdeA
<i>StjaHEC3</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN8155_c0_g1_i1	UdeA
<i>StuHEC1</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMT400010344	Phyto
<i>StuHEC1-1</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMT400020558	Phyto
<i>StuHEC2</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMT400048857	Phyto
<i>StuHEC3</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMT400073760	Phyto
REPLUMLESS genes				
<i>RPL</i>	<i>Arabidopsis thaliana</i>	Brassicaceae	At5g02030	Phyto
<i>BrauRPL1</i>	<i>Brunfelsia australis</i>	Solanaceae	DN33435 i3	UdeA
<i>BrauRPL2</i>	<i>Brunfelsia australis</i>	Solanaceae	DN28660 i2	UdeA
<i>BrsuRPL1</i>	<i>Brugmansia suaveolens</i>	Solanaceae	TRINITY_DN26133_c4_g1_i2	UdeA
<i>BrsuRPL2</i>	<i>Brugmansia suaveolens</i>	Solanaceae	TRINITY_DN22441_c1_g1_i2	UdeA
<i>CaanRPL1</i>	<i>Capsicum annuum cv CM334</i>	Solanaceae	CA10g05080	SGN
<i>CaanRPL2</i>	<i>Capsicum annuum cv CM334</i>	Solanaceae	CA00g18370	SGN
<i>CaanGRPL</i>	<i>Capsicum annuum var. Glabriscum</i>	Solanaceae	Capana10g001172	SGN
<i>CaanZRPL</i>	<i>Capsicum annuum var. Zunla</i>	Solanaceae	Capana10g001383	SGN
<i>CenoRPL2-1</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN22827_c0_g1_i1	UdeA
<i>CenoRPL2-2</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN22827_c0_g1_i2	UdeA
<i>LybaRPL1</i>	<i>Lycium barbarum</i>	Solanaceae	LWCK-2075139	OneKP
<i>LybaRPL2</i>	<i>Lycium barbarum</i>	Solanaceae	LWCK-2009336	OneKP
<i>LychRPL1</i>	<i>Lycopersicon cheesmaniae</i>	Solanaceae	UGJI-2003766	OneKP
<i>LychRPL2</i>	<i>Lycopersicon cheesmaniae</i>	Solanaceae	UGJI-2121697	OneKP
<i>LyspRPL1</i>	<i>Lycium sp.</i>	Solanaceae	OSMU-2076426	OneKP
<i>LyspRPL2</i>	<i>Lycium sp.</i>	Solanaceae	OSMU-2074624/OSMU-2078894	OneKP
<i>NitaRPL1</i>	<i>Nicotiana tabacum</i>	Solanaceae	mRNA_111768	SGN
<i>NitaRPL2</i>	<i>Nicotiana tabacum</i>	Solanaceae	mRNA_129668_cds	SGN
<i>NsylRPL1</i>	<i>Nicotiana sylvestris</i>	Solanaceae	MKZR-2004973/mRNA_6435_cds	OneKP/ SGN

<i>NsylRPL2</i>	<i>Nicotiana sylvestris</i>	Solanaceae	MKZR-2017542	OneKP
<i>PeaxRPL1</i>	<i>Petunia axillaris</i>	Solanaceae	Peaxi162Scf00318g00211.1	SGN
<i>PeaxRPL2</i>	<i>Petunia axillaris</i>	Solanaceae	Peaxi162Scf00014g01719.1	SGN
<i>PeinRPL1</i>	<i>Petunia inflata</i>	Solanaceae	Peinf101Scf00144g03023.1	SGN
<i>PeinRPL2</i>	<i>Petunia inflata</i>	Solanaceae	Peinf101Scf00144g03023.1	SGN
<i>SoduRPL1</i>	<i>Solanum dulcamara</i>	Solanaceae	GHLP-2006410	OneKP
<i>SoduRPL2</i>	<i>Solanum dulcamara</i>	Solanaceae	GHLP-2059273	OneKP
<i>SomeRPL1</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_00970.1_g00001.1	SGN
<i>SomeRPL2</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_00970.1_g00001.1	SGN
<i>StjaRPL</i>	<i>Streptosolen jamesonii</i>	Solanaceae	DN10896 c0 g1 i1	UdeA
<i>SolaRPL1</i>	<i>Solanum lasiophyllum</i>	Solanaceae	DLAI-2004919	OneKP
<i>SolaRPL2</i>	<i>Solanum lasiophyllum</i>	Solanaceae	DLAI-2002365	OneKP
<i>SlyRPL1</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc10g086640.1	Phyto
<i>SlyRPL2</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc09g011380.2	Phyto
<i>SopeRPL1</i>	<i>Solanum pennellii</i>	Solanaceae	Sopen10g036050	SGN
<i>SopeRPL2</i>	<i>Solanum pennellii</i>	Solanaceae	Sopen09g006110	SGN
<i>SopiRPL1</i>	<i>Solanum pimpinellifolium</i>	Solanaceae	Sopim10g086640.0.1	SGN
<i>SopiRPL2</i>	<i>Solanum pimpinellifolium</i>	Solanaceae	Sopim09g011380.0.1	SGN
<i>SoptRPL1</i>	<i>Solanum ptychanthum</i>	Solanaceae	DLJZ-2053145	OneKP
<i>SoptRPL2</i>	<i>Solanum ptychanthum</i>	Solanaceae	DLJZ-2001908	OneKP
<i>SosiRPL</i>	<i>Solanum sisymbriifolium</i>	Solanaceae	NMDZ-2079258	OneKP
<i>StuRPL1</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMG400019142	Phyto
<i>StuRPL2</i>	<i>Solanum tuberosum</i>	Solanaceae	PGSC0003DMG400020824	Phyto
<i>SoxaRPL1</i>	<i>Solanum xanthocarpum</i>	Solanaceae	LQJY-2082190	OneKP
<i>SoxaRPL2</i>	<i>Solanum xanthocarpum</i>	Solanaceae	LQJY-2082447	OneKP
AGAMOUS/SHATTERPROOF genes				
<i>AtbeAG</i>	<i>Atropa belladonna</i>	Solanaceae	BOLZ-2039454	OneKp
<i>AtbeSHP</i>	<i>Atropa belladonna</i>	Solanaceae	BOLZ-2021153	OneKp
<i>BrauAG</i>	<i>Brunfelsia australis</i>	Solanaceae	TRINITY_DN11345_c0_g1_i1	UdeA
<i>BrauSHP</i>	<i>Brunfelsia australis</i>	Solanaceae	TRINITY_DN16015_c0_g1_i1	UdeA
<i>BrsuAG</i>	<i>Brugmansia suaveolens</i>	Solanaceae	TRINITY_DN17449_c0_g1_i1	UdeA
<i>BrsuSHP1</i>	<i>Brugmansia suaveolens</i>	Solanaceae	TRINITY_DN18197_c0_g1_i1	UdeA
<i>BrsuSHP2</i>	<i>Brugmansia suaveolens</i>	Solanaceae	TRINITY_DN18197_c0_g1_i3	UdeA
<i>CaanGIAG</i>	<i>Capsicum annuum var. glabriusculum</i>	Solanaceae	Capang02g001521	SGN
<i>CaanZuAG</i>	<i>Capsicum annuum Zunla</i>	Solanaceae	Capana02g001695	SGN
<i>CaanZuSHP</i>	<i>Capsicum annuum Zunla</i>	Solanaceae	Capana07g001940	SGN
<i>CaanCmAG1</i>	<i>Capsicum annuum CM334</i>	Solanaceae	CAG12980	SGN
<i>CaanCmAG2</i>	<i>Capsicum annuum CM334</i>	Solanaceae	CAG12970	SGN
<i>CaanCmAG3</i>	<i>Capsicum annuum CM334</i>	Solanaceae	CAG12960	SGN
<i>CaanAG</i>	<i>Capsicum annuum</i>	Solanaceae	HM565943	NCBI
<i>CaanSHP1</i>	<i>Capsicum annuum CM334</i>	Solanaceae	Ca07g15230	SGN
<i>CaanSHP2</i>	<i>Capsicum annuum CM334</i>	Solanaceae	Ca07g15240	SGN
<i>CenoAG</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN17812_c0_g1_i2	UdeA
<i>CenoSHP</i>	<i>Cestrum nocturnum</i>	Solanaceae	TRINITY_DN27323_c0_g1_i2	UdeA
<i>LybaAG</i>	<i>Lycium barbarum</i>	Solanaceae	LWCK-2076050	OneKp

<i>LybaSHP</i>	<i>Lycium barbarum</i>	Solanaceae	LWCK-2006633	OneKp
<i>LyspAG</i>	<i>Lycium sp</i>	Solanaceae	OSMU-2011751	OneKp
<i>LyspSHP</i>	<i>Lycium sp</i>	Solanaceae	OSMU-2077894	OneKp
<i>NiatAG1</i>	<i>Nicotiana attenuata</i>	Solanaceae	XM019377632	NCBI
<i>NiatAG2</i>	<i>Nicotiana attenuata</i>	Solanaceae	XM019377633	NCBI
<i>NiatAG3</i>	<i>Nicotiana attenuata</i>	Solanaceae	XM019377634	NCBI
<i>NiatAG4</i>	<i>Nicotiana attenuata</i>	Solanaceae	XM019377635	NCBI
<i>NibeAG1</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf07812g00015.1	SGN
<i>NibeAG1-2</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf07812g00015.1	SGN
<i>NibeAG2</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf12205g00011.1	SGN
<i>NbSHP</i>	<i>Nicotiana benthamiana</i>	Solanaceae	JQ699178	NCBI
<i>NibeSHP2</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf07678g019	SGN
<i>NibeSHP3</i>	<i>Nicotiana benthamiana</i>	Solanaceae	Niben101Scf07678g017	SGN
<i>NsylAG1</i>	<i>Nicotiana sylvestris</i>	Solanaceae	XM009804457	NCBI
<i>NsylAG2</i>	<i>Nicotiana sylvestris</i>	Solanaceae	XM009804458	NCBI
<i>NsylAG3</i>	<i>Nicotiana sylvestris</i>	Solanaceae	XM009804459	NCBI
<i>NsylSHP</i>	<i>Nicotiana sylvestris</i>	Solanaceae	mRNA_61687_cds	SGN
<i>NitaTAG1</i>	<i>Nicotiana tabacum TN90</i>	Solanaceae	mRNA_92225_cds	SGN
<i>NitaTAG2</i>	<i>Nicotiana tabacum TN90</i>	Solanaceae	mRNA_73080_cds	SGN
<i>NitaSHP1</i>	<i>Nicotiana tabacum TN90</i>	Solanaceae	mRNA_80028_cds	SGN
<i>NitaSHP2</i>	<i>Nicotiana tabacum TN90</i>	Solanaceae	mRNA_12687_cds	SGN
<i>NitoAG1</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	XM009588425	NCBI
<i>NitoAG2</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	XM009588426	NCBI
<i>NitoAG3</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	XM009588427	NCBI
<i>NitoAG4</i>	<i>Nicotiana tomentosiformis</i>	Solanaceae	XM009588428	NCBI
<i>PeaxAG1</i>	<i>Petunia axilaris</i>	Solanaceae	Peaxi162Scf00022g00098.1	SGN
<i>PeaxAG2</i>	<i>Petunia axilaris</i>	Solanaceae	Peaxi162Scf00022g00098.1	SGN
<i>PeaxSHP1</i>	<i>Petunia axilaris</i>	Solanaceae	Peaxi162Scf00154	SGN
<i>PeaxSHP2</i>	<i>Petunia axilaris</i>	Solanaceae	Peaxi162Scf00020g02338.1	SGN
<i>PeinAG</i>	<i>Petunia inflata</i>	Solanaceae	Peinf101Scf00304	SGN
<i>PeinSHP</i>	<i>Petunia inflata</i>	Solanaceae	Peinf101Scf00434	SGN
<i>FBP6</i>	<i>Petunia hybrida</i>	Solanaceae	AY370525	NCBI
<i>SolaAG</i>	<i>Solanum lasiophyllum</i>	Solanaceae	DLAI-2096845	OneKp
<i>TAG1</i>	<i>Solanum lycopersicum</i>	Solanaceae	Solyc02g071730.3.1	SGN
<i>TAGL1</i>	<i>Solanum lycopersicum</i>	Solanaceae		SGN
<i>SomeAG1</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_04194.1_g00003.1	SGN
<i>SomeSHP</i>	<i>Solanum melongena</i>	Solanaceae	Sme2.5_00135.1_g00012.1	SGN
<i>SopeAG</i>	<i>Solanum penelli</i>	Solanaceae	Sopen02g020720	SGN
<i>SopeSHP</i>	<i>Solanum penelli</i>	Solanaceae	Sopen07g029280	SGN
<i>SopiSHP</i>	<i>Solanum pinpinellifolium</i>	Solanaceae	Contig_2909188	SGN
<i>SoptAG</i>	<i>Solanum ptychanthum</i>	Solanaceae	DLJZ-2010704	OneKp
<i>SoptSHP</i>	<i>Solanum ptychanthum</i>	Solanaceae	DLJZ-2002925	OneKp
<i>StuAG1</i>	<i>Solanum tuberosum</i>	Solanaceae	Sotub02g018200.1.1	SGN
<i>StuSHP1</i>	<i>Solanum tuberosum</i>	Solanaceae	Sotub07g023200.1.1	SGN
<i>StuSHP2</i>	<i>Solanum tuberosum</i>	Solanaceae	Sotub07g023190.1.1	SGN
<i>StuSHP3</i>	<i>Solanum tuberosum</i>	Solanaceae	Sotub07g023191.1.1	SGN

<i>SoxaAG1</i>	<i>Solanum xanthocarpum</i>	Solanaceae	LQJY-2008939	OneKp
<i>SoxaAG2</i>	<i>Solanum xanthocarpum</i>	Solanaceae	LQJY-2008940	OneKp
<i>SoxaSHP</i>	<i>Solanum xanthocarpum</i>	Solanaceae	LQJY-2009701	OneKp
<i>StjaAG</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN11324_c0_g1_i1	UdeA
<i>StjaSHP</i>	<i>Streptosolen jamesonii</i>	Solanaceae	TRINITY_DN24588_c0_g1_i1	UdeA

Complete scientific names for the above cited species

<i>Atropa belladonna</i> L.
<i>Arabidopsis thaliana</i> (L.) Heynh.
<i>Brunfelsia pauciflora</i> (Cham. & Schltld.) Benth.
<i>Brugmansia sanguinea</i> (Ruiz & Pav.) D. Don
<i>Capsicum annuum</i> cv CM334
<i>Capsicum annuum</i> var. <i>Glabriscum</i> (Dunal) Heiser & Pickersgill
<i>Capsicum annuum</i> cv CM334
<i>Capsicum annuum</i> var. <i>Zunla</i> L.
<i>Lycium barbarum</i> L.
<i>Lycopersicon cheesmaniae</i> L. Riley
<i>Lycium</i> sp. L.
<i>Nicotiana tabacum</i>
<i>Nicotiana sylvestris</i>
<i>Nicotiana tabacum</i> BX
<i>Nicotiana tabacum</i> K236
<i>Nicotiana tabacum</i> TN90
<i>Petunia axillaris</i> (Lam.) Britton, Sterns & Poggenb.
<i>Petunia inflata</i> R.E. Fr.
<i>Solanum dulcamara</i> (Moench) Dumort.
<i>Solanum melongena</i> (Mill.) Dunal
<i>Streptosolen jamesonii</i> (Benth.) Miers
<i>Solanum lasiophyllum</i> Humb. & Bonpl. ex Dunal
<i>Solanum lycopersicum</i> L.
<i>Solanum pennellii</i> Correl
<i>Solanum pimpinellifolium</i> L.
<i>Solanum ptychanthum</i> Dunal.
<i>Solanum sisymbriifolium</i> Lam.
<i>Solanum tuberosum</i> L.
<i>Solanum xanthocarpum</i> Schrad. & J.C. Wendl.

Table S2. Sequence 5' - 3' for all primers used in Fig. 4, *expression analyses of ALCATRAZ, FRUITFULL, HECATE, REPLUMLESS, SHATTERPROOF and SPATULA homologs in Cestrum nocturnum and Brugmansia suaveolens.*

Primer Name	Sequence Primer 5'-3'
<i>Cestrum nocturnum</i>	
<i>CenoALCFwd</i>	ATCCGTACAGAACAAACCCCTCAC
<i>CenoALCREv</i>	GCAGATCCTCCATTTGAACTGAGCA
<i>CenoFUL1Fwd</i>	ACTTGTTGCTACTGATCCTGCCT
<i>CenoFUL1Rev</i>	TTACCTGCCTCTACTTCTCCAGCA
<i>CenoFUL2Fwd</i>	AGGCAGCTCAATCCTACTCATGA
<i>CenoFUL2Rev</i>	TGCTGCGACAATCCTTCAATCTCT
<i>CenoMBP20Fwd</i>	AACGCCAATCACTCTGATCCCAA
<i>CenoMBP20Rev</i>	TTAGCTTGACTTTCATCTGTCCC
<i>CenoHEC1Fwd</i>	CTCCTCCTTCAAATTTCTCCTTCA
<i>CenoHEC1Rev</i>	TTATTCGTTCCCTCCGATGCCT
<i>CenoHEC2Fwd</i>	CGGAATCAGTGAAGCCACCAAAG
<i>CenoHEC2Rev</i>	CCTGCTCTTCCAGTGTTTGCAC
<i>CenoHEC3Fwd</i>	TGCAACAACAAGTACTCCCTTT
<i>CenoHEC3Rev</i>	TTACCATTTACCTCATACGTAGGAG
<i>CenoRPL2-1Fwd</i>	CCGGGCTATTAATGTTGTTTATG
<i>CenoRPL2-1 y RPL2-2 Rev</i>	CCAACCATGAACCTGTCATGACT
<i>CenoRPL2-2Fwd</i>	CCTTAAAGATGCCATCACTGACC
<i>CenoSHPFwd</i>	CTAATCAAGAATTTGAGGAGTCGTC
<i>CenoSHPREv</i>	TGGATTTGGTTCGAGCAGATTCAC
<i>CenoSPTFwd</i>	ATGGCCAACAATCATACTTTTCATC
<i>CenoSPTRev</i>	AGCAGCAGGGAAATGCGAACTCAT
<i>Brugmansia suaveolens</i>	
<i>BrsuALCFwd</i>	ATCCGTACAGAACGAACCCCTCA
<i>BrsuALCREv</i>	TGTAGCTCCTCCATTTGCACTCA
<i>BrsuFUL1Fwd</i>	TGCTCCTAATGATCATACCTCCCA
<i>BrsuFUL1Rev</i>	ACAGTATTAGCAGGTTGCTGCTGT
<i>BrsuFUL2Fwd</i>	AGCTTAATGCTACTGATCATGTGC
<i>BrsuFUL2Rev</i>	AGTGTTGTGTTGTTGCTGCCGCA
<i>BrsuMBP10Fwd</i>	CTCCTATGCGAAGACTCAAACCTT
<i>BrsuMBP10Rev</i>	ATGACGATTTTGACCTTCATCCGT
<i>BrsuMBP20Fwd</i>	TGAATGCAAATGACTCTGATCCC
<i>BrsuMBP20Rev</i>	ATACTCAGCTTGACCCGATCCAT
<i>BrsuHEC2Fwd</i>	CAGACTTCTCTACTGGTAATTGT
<i>BrsuHEC2Rev</i>	CACTCAAAGACATTGGTACAGGGA
<i>BrsuRPL1Fwd</i>	TACTGAGCTAAAAGGACTGAAAG
<i>BrsuRPL1Rev</i>	TTGATGGATTTTGATCGGATGGGA
<i>BrsuRPL2Fwd</i>	TGAACCATACCATGTCCCACAAC
<i>BrsuRPL2Rev</i>	CAAAGTGGAATAATCATCAGCAGC

<i>BrsuSHP1 y SHP2 Fwd</i>	CAAGCGTAGAAATGGGCTACTAAA
<i>BrsuSHP1Rev</i>	TGAGGATTAGGTTCCAGCAGATTTA
<i>BrsuSHP2Rev</i>	CCAAACAAGTATGTGTAACACTAG
<i>BrsuSPTFwd</i>	TATAACATGCCTGCAAGTGCAACG
<i>BrsuSPTRev</i>	GAGATCCCAGCCACTTTAGCAT
<i>ACTIN Fwd</i>	GATGGATCCTCCAATCCAGACACTGTA
<i>ACTIN Rev</i>	GTATTGTGTTGGACTCTGGTGATGGTGT