

Supplemental material 1. Isoforms of the genes identified of phenylpropanoid pathway in *Rubus* sp. var. Lochness transcriptome.

	geneID	Gene Length	RF1 FPKM	RF1 FPKM	Nr-ID	Nr-Score	Nr-Value	
Ru4CL	Unigene12367	794	0,08	0,80	gij9651917 gb AAF91310.1 AF239687_1	517,7	8,00E-146	4-coumarate:coA ligase 1 [Rubus idaeus]
	<b>Unigene16366</b>	<b>2093</b>	<b>47,71</b>	<b>27,18</b>	<b>gij9651915 gb AAF91309.1 AF239686_1</b>	<b>1055,4</b>	<b>0</b>	<b>4-coumarate:coA ligase 2 [Rubus idaeus]</b>
	Unigene13214	311	3,62	1,43	gij9651913 gb AAF91308.1 AF239685_1	140,2	9,00E-33	4-coumarate:coA ligase 3 [Rubus idaeus]
	Unigene13466	332	0,80	1,15	gi 470134772 ref XP_004303212.1	186	1,00E-46	PREDIC.: 4-coumarate--CoA ligase 1-like [Fragaria vesca subsp. vesca]
	Unigene4142	1732	2,94	4,22	gij9651913 gb AAF91308.1 AF239685_1	939,5	0	4-coumarate:coA ligase 3 [Rubus idaeus]
RuAGT	<b>Unigene8869</b>	<b>1735</b>	<b>1858,04</b>	<b>1503,45</b>	<b>gi 157888994 dbj BAF80946.1 </b>	<b>774,6</b>	<b>0</b>	<b>UDP-glucose: anthocyanin 3-glucosyltransferase [Rosa hybrid cultivar]</b>
RuANR	<b>Unigene2512</b>	<b>1341</b>	<b>4,69</b>	<b>5,93</b>	<b>gi 110564477 gb ABG76842.1 </b>	<b>625,5</b>	<b>6E-178</b>	<b>anthocyanidin reductase [Fragaria x ananassa]</b>
	<b>Unigene2522</b>	<b>1339</b>	<b>23,64</b>	<b>23,21</b>	<b>gi 470129936 ref XP_004300863.1 </b>	<b>578,6</b>	<b>8,00E-164</b>	<b>PREDIC.: anthocyanidin reductase-like [Fragaria vesca subsp. vesca]</b>
	Unigene653	627	1,69	2,53	gi 297745410 emb CBI40490.3	51,2	3,00E-42	unnamed protein product [Vitis vinifera]
RuANS	<b>Unigene4439</b>	<b>1677</b>	<b>2021,14</b>	<b>1848,25</b>	<b>gi 470125461 ref XP_004298720.1 </b>	<b>710,3</b>	<b>0</b>	<b>PREDIC.: leucoanthocyanidin dioxygenase-like [Fragaria vesca subsp. vesca]</b>
	Unigene7051	1422	247,88	297,89	gi 462419517 gb EMJ23780.1	605,1	9,00E-172	hypothetical protein PRUPE_ppa008455mg [Prunus persica]
	Unigene10888	1576	134,12	84,78	gi 470144031 ref XP_004307670.1	685,6	0	PREDIC.: flavonol synthase/flavanone 3-hydroxylase-like [Fragaria vesca]
RuC4H	Unigene19458	238	0,00	0,27	gi 470127623 ref XP_004299767.1	159,1	2,00E-38	PREDIC.: trans-cinnamate 4-monooxygenase-like [Fragaria vesca subsp. vesca]
	Unigene21546	293	0,00	0,00	gi 462422005 gb EMJ26268.1	196,1	1,00E-49	hypothetical protein PRUPE_ppa018282mg, partial [Prunus persica]
	Unigene21762	203	0,33	0,00	gi 470127623 ref XP_004299767.1	134,4	5,00E-31	PREDIC.: trans-cinnamate 4-monooxygenase-like [Fragaria vesca subsp. vesca]
	<b>Unigene5281</b>	<b>1878</b>	<b>305,35</b>	<b>278,87</b>	<b>gi 221328921 gb ACM17896.1 </b>	<b>1001,5</b>	<b>0</b>	<b>cinnamate-4-hydroxylase [Rubus occidentalis]</b>
	Unigene9503	376	0,00	0,68	gi 470127623 ref XP_004299767.1	233,8	6,00E-61	PREDIC.: trans-cinnamate 4-monooxygenase-like [Fragaria vesca subsp. vesca]
RuCHI	<b>CL5405 (Iso1)</b>	<b>1061</b>	<b>467.8972</b>	<b>417.0408</b>	<b>gi 470144168 ref XP_004307734.1 </b>	<b>397.1</b>	<b>2.00E-109</b>	<b>PREDIC.: chalcone--flavonone isomerase-like [Fragaria vesca subsp. vesca]</b>
	<b>Unigene16160 (Iso2)</b>	<b>1556</b>	<b>428.1638</b>	<b>429.4765</b>	<b>gi 470143579 ref XP_004307451.1 </b>	<b>407.1</b>	<b>4.00E-112</b>	<b>PREDIC.: chalcone--flavonone isomerase 1-like [Fragaria vesca subsp. vesca]</b>
	Unigene17871	1063	3.6753	4.0663	gi 470116014 ref XP_004294183.1	470.3	2.00E-131	PREDIC.: chalcone--flavonone isomerase 2-like [Fragaria vesca subsp. vesca]
RuCHS	<b>CL6637</b>	<b>1712</b>	<b>1024,76</b>	<b>939,12</b>	<b>gi 22086372 gb AAM90652.1 AF400567_1</b>	<b>775</b>	<b>0</b>	<b>chalcone synthase 6 [Rubus idaeus]</b>
RuDFR	<b>Unigene5062</b>	<b>1117</b>	<b>407,39</b>	<b>408,88</b>	<b>gi 470111242 ref XP_004291858.1 </b>	<b>645,2</b>	<b>0</b>	<b>PREDIC.: dihydroflavonol4-reductase/flavanone 4-reductase- [Fragaria vesca]</b>
	CL2114	1421	7,64	8,59	gi 470142458 ref XP_004306924.1	549,3	6,00E-155	PREDIC.: dihydroflavonol-4-reductase-like [Fragaria vesca subsp. vesca]
	Unigene1168	1638	22,48	20,53	gi 470142462 ref XP_004306926.1	489,2	9,00E-137	PREDIC.: dihydroflavonol-4-reductase-like [Fragaria vesca subsp. vesca]
	Unigene10789	1389	10,49	13,59	gi 470116315 ref XP_004294328.1	619,8	3,00E-176	PREDIC.: dihydroflavonol-4-reductase-like [Fragaria vesca subsp. vesca]
	CL3922	1472	0,22	0,22	gi 470109675 ref XP_004291118.1	618,6	8,00E-176	PREDIC.: putative dihydroflavonol-4-reductase-like [Fragaria vesca subsp. vesca]
	Unigene12257	877	1,21	1,88	gi 462416254 gb EMJ20991.1	264,6	1,00E-69	hypothetical protein PRUPE_ppa026509mg, partial [Prunus persica]
	Unigene10163	1272	4,48	5,60	gi 470112433 ref XP_004292439.1	672,5	0	PREDIC.: epimerase family protein slr1223-like [Fragaria vesca subsp. vesca]
RuF3'5'H	<b>Unigene3145</b>	<b>1596</b>	<b>173,76</b>	<b>155,73</b>	<b>gi 470103987 ref XP_004288406.1 </b>	<b>446</b>	<b>8E-124</b>	<b>PREDIC.: uncharacterized protein LOC101310934 isoform 1 [Fragaria vesca subsp. vesca]</b>

	CL1570	1656	2,36	3,99	gi 470125387 ref XP_004298684.1	846,7	0	PREDIC.: flavonoid 3'-5'-hydroxylase-like [Fragaria vesca subsp. vesca]
RuF3H	<b>Unigene16038</b>	<b>1850</b>	<b>2162,83</b>	<b>1975,59</b>	<b>gi 161597781 gb ABX74780.1 </b>	<b>717,2</b>	<b>0</b>	<b>flavanone-3-hydroxylase [Rubus sp. SSL-2007]</b>
	Unigene18040	1285	2,06	6,28	gi 470145288 ref XP_004308273.1	620,2	2,00E-176	PREDIC.: naringenin,2-oxoglutarate3-dioxygenase-like[Fragaria vesca subsp. vesca]
	Unigene2612	1495	14,88	11,40	gi 470144544 ref XP_004307914.1	650,2	0	PREDIC.: flavanone 3-dioxygenase-like [Fragaria vesca subsp. vesca]
	Unigene1033	1286	22,50	19,57	gi 470141150 ref XP_004306298.1	641,7	0	PREDIC.: naringenin,2-oxoglutarate3-dioxygenase-like [Fragaria vesca subsp. vesca]
	Unigene10888	1576	134,12	84,78	gi 470144031 ref XP_004307670.1	685,6	0	PREDIC.: flavonol synthase/flavanone3-hydroxylase-like isoform 1 [Fragaria vesca]
	Unigene7051	1422	247,88	297,89	gi 462419517 gb EMJ23780.1	605,1	9,00E-172	hypothetical protein PRUPE_ppa008455mg [Prunus persica]
	CL430	1545	3,77	4,16	gi 462403437 gb EMJ08994.1	497,3	3,00E-139	hypothetical protein PRUPE_ppa025000mg, partial [Prunus persica]
RuF3'H	CL1193	<b>1262</b>	<b>1,26</b>	<b>2,07</b>	gi 462401212 gb EMJ06769.1	610,5	1E-173	hypothetical protein PRUPE_ppa008740mg [Prunus persica]
	<b>Unigene3117</b>	<b>1782</b>	<b>312,81</b>	<b>327,42</b>	<b>gi 377550336 dbj BAL63027.1 </b>	<b>906,7</b>	<b>0</b>	<b>flavonoid 3'-hydroxylase [Fragaria x ananassa]</b>
	CL1570	907	<b>1,17</b>	<b>1,05</b>	gi 470125387 ref XP_004298684.1	476,5	2,00E-133	PREDIC.: flavonoid 3',5'-hydroxylase-like [Fragaria vesca subsp. vesca]
		1656	<b>2,36</b>	<b>3,99</b>	gi 470125387 ref XP_004298684.1	846,7	0	PREDIC.: flavonoid 3',5'-hydroxylase-like [Fragaria vesca subsp. vesca]
	CL1859	1745	<b>6,45</b>	<b>3,72</b>	gi 470149050 ref XP_004310057.1	831,2	0	PREDIC.: geraniol 8-hydroxylase-like [Fragaria vesca subsp. vesca]
	CL5325	2145	<b>1,36</b>	<b>2,61</b>	gi 470105227 ref XP_004288988.1	905,2	0	PREDIC.: flavonoid 3'-monooxygenase-like [Fragaria vesca subsp. vesca]
RuFLS	<b>Unigene7051</b>	<b>1422</b>	<b>247,88</b>	<b>297,89</b>	<b>gi 462419517 gb EMJ23780.1 </b>	<b>605,1</b>	<b>9,00E-172</b>	<b>hypothetical protein PRUPE_ppa008455mg [Prunus persica]</b>
RuFGT	<b>CL2933</b>	<b>1283</b>	<b>1,29</b>	<b>1,59</b>	<b>gi 157888996 dbj BAF80947.1 </b>	<b>664,1</b>	<b>0</b>	<b>UDP-glucose:flavonol 3-glucosyltransferase [Rosa hybrid cultivar]</b>
RuLAR	<b>Unigene488</b>	<b>1313</b>	<b>4,14</b>	<b>6,00</b>	<b>gi 401715671 gb AFP99288.1 </b>	<b>646,4</b>	<b>0</b>	<b>leucoanthocyanidin reductase [Fragaria x ananassa]</b>
RuPAL	<b>CL4350 PAL 1</b>	<b>1725</b>	<b>0,61</b>	<b>0,41</b>	<b>gi 14195012 sp Q9M568.1 PAL1_RUBID</b>	<b>1002,3</b>	<b>0</b>	<b>RecName: Full=Phenylalanine ammonia-lyase 1; AltName: Full=RiPAL1</b>
	<b>Unigene698 PAL 2</b>	<b>803</b>	<b>8,99</b>	<b>7,84</b>	<b>gi 14195012 sp Q9M568.1 PAL1_RUBID</b>	<b>369,4</b>	<b>3,00E-101</b>	<b>RecName: Full=Phenylalanine ammonia-lyase 1; AltName: Full=RiPAL1</b>
RuPAT	<b>Unigene7392</b>	<b>1794</b>	<b>4.4662</b>	<b>4.3936</b>	<b>gi 470144854 ref XP_004308062.1 </b>	<b>880.2</b>	<b>0</b>	<b>PREDIC.: protein TRANSPARENT TESTA 12-like [Fragaria vesca subsp. vesca]</b>
	Unigene7484	1447	0.4119	0.5272	gi 470144854 ref XP_004308062.1	734.2	0	PREDIC.: protein TRANSPARENT TESTA 12-like [Fragaria vesca subsp. vesca]
	Unigene5791	1690	1.4106	1.5045	gi 470144854 ref XP_004308062.1	876.7	0	PREDIC.: protein TRANSPARENT TESTA 12-like [Fragaria vesca subsp. vesca]
RuMYB1	CL343	1079	12,70	11,43	gi 393808395 gb AFN25407.1	427,2	2E-118	R2R3 MYB transcription factor [Rubus hybrid cultivar]
RuMYB2	Unigene13073	1156	19,42	19,69	gi 315937167 gb ADU56173.1	464,9	1E-129	MYB domain class transcription factor [Fragaria vesca]
RuMYB4	<b>CL4055</b>	<b>1182</b>	<b>6,83</b>	<b>9,52</b>	<b>gi 470107055 ref XP_004289866.1 </b>	<b>470,7</b>	<b>2,00E-131</b>	<b>PREDIC.: myb-related protein 308-like [Fragaria vesca subsp. vesca]</b>
RuMYB5	<b>CL216</b>	<b>2127</b>	<b>2.8642</b>	<b>2.8391</b>	<b>gi 470117735 ref XP_004295005.1 </b>	<b>509.6</b>	<b>8.00E-143</b>	<b>PREDIC.: transcription repressor MYB5-like [Fragaria vesca subsp. vesca]</b>
RuMYB6	<b>Unigene12151</b>	<b>1391</b>	<b>8.5213</b>	<b>9.0939</b>	<b>gi 327412615 emb CCA29096.1 </b>	<b>624</b>	<b>1.00E-177</b>	<b>putative MYB transcription factor [Rosa rugosa]</b>
RuBHLH1	<b>Unigene12758</b>	<b>2842</b>	<b>26,93</b>	<b>28,41</b>	<b>gi 401782370 dbj BAM36702.1 </b>	<b>1261,9</b>	<b>0</b>	<b>bHLH transcriptional factor AN1 homolog [Rosa hybrid cultivar]</b>

TTG1	<b>CL6588</b>	1557	16,12	13,84	gi 336442437 gb AEI55401.1	703,7	0	TTG1 [Rubus idaeus]
RuPR1	<b>Unigene9504</b>	387	0,34	0,49	gi 470120663 ref XP_004296417.1	250	8,00E-66	PREDIC.: pathogenesis-related protein PR-1-like [Fragaria vesca subsp. vesca]
RuPR2	<b>Unigene6519</b>	1305	7,81	6,19	gi 16903144 gb AAL30426.1 AF435089_1	538,5	9,00E-152	beta-1,3-glucanase [Prunus persica]
RuPR3	<b>Unigene13345</b>	330	0,60	0,39	gi 470144783 ref XP_004308027.1	208,8	2,00E-53	PREDIC.: acidic endochitinase-like [Fragaria vesca subsp. vesca]
RuPR4	<b>Unigene8680</b>	465	1,85	2,05	gi 470114870 ref XP_004293631.1	271,2	3,00E-72	PREDIC.: pathogenesis-related protein PR-4B-like [Fragaria vesca subsp. vesca]