

Figure S1. Growth curve of the different lines of adventitious roots (ARc) and hairy roots (HRc) obtained from *Linum austriacum* seedlings. **(a)** Growth curves of ARc lines. **(b)** Growth curves of HRc lines. FW: fresh weight expressed in g, grams. Each value represents the average of three biological replicates \pm SD.

(a)



(b)



(c)



(d)



Figure S2. Picture of *Linum austriacum* adventitious (ARc) and hairy roots (HRc) tissues during the kinetic of growth. (a) ARc at the beginning of the growth kinetic (0 days), and (b) after four weeks. (c) HRc at the beginning of the growth kinetic (0 days), and (d) after four weeks.

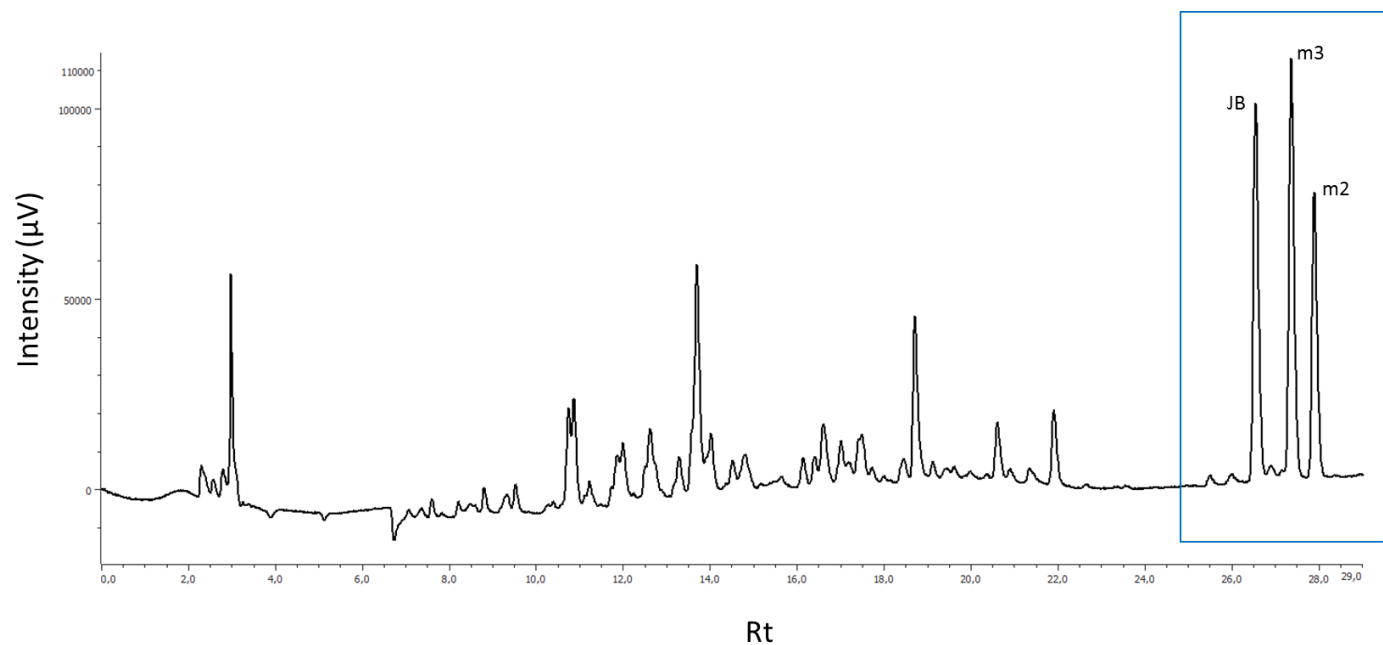


Figure S3. Full chromatogram from elicited extract of *Linum austriacum* adventitious roots (ARc). The separation was performed using a Synergi polar RP 80 Å (250 mm x 4.60 mm, 4 μm, Phenomenex) and a gradient system with water 0.1% (v/v) formic acid (A) and acetonitrile 0.1% (v/v) formic acid (B) as eluent as follows: 0-70% B for the first 26 min, from 70 to 0% B in 1 min and 0% B up to 30 min. The flow rate was 1.0 ml/min. The wavelength was monitored from 210 to 350 nm and the signals were integrated at 254 nm with a UV detector.

Table S1. Proton and carbon NMR resonance assignment (ppm) for justicidin B dissolved in CDCl₃. Proton and carbon chemical shift are referred to the solvent signal. Numbers are consistent with molecular structure reported in Figure 3b.

n°	¹ H	¹³ C
1		133.2
2		128.9
3	7.13	105.9
4		151.8
5		150.3
6	7.2	106.2
7	7.72	118.4
8		139.6
9	5.4	68.18
10	6.11/6.07	101.4
11	3.83	55.9
12	4.06	56.1
1'		128.4
2'	6.87	110.8
3'		147.6
4'		147.6
5'	6.98	108.5
6'	6.85	123.5
7'		139.7
8'		118.4
C=O		170.1

Table S2. Proton and carbon NMR resonance assignment (ppm) for isojusticidin B dissolved in CDCl₃. Proton and carbon chemical shift are referred to the solvent signal. Numbers are consistent with the molecular structure reported in Figure 5b.

n°	¹ H	¹³ C
1		132.8
2		128.5
3		146.2
4		150.5
5	7.5	118.2
6	7.73	124.8
7	7.82	120.9
7'		139.9
8		137.7
8'		121.6
9	5.37	67.6
10	6	101
11	3.35	60.9
12	3.97	56.8
1'		130.6
2'	6.82	109.7
3'		146.7
4'		146.5
5'	6.88	107.2
6'	6.77	121.7
C=O		169.2

Table S3. *Linum austriacum* transcripts associated to the justicidin B pathway.

	Reaction	Predicted enzymes ^a	Plant species	Enzyme	Hits identified	Hits selected
STEP 1 from L-phenylalanine to 4-coumarate	1	Lus10001405 Lus10013805 (PLA4) ^c Lus10023531 (PAL2) ^c Lus10026518 (PAL3) ^c Lus10040416 (PAL1) ^c NM_129260.3 NM_115186.4 NM_001203294.1 NM_111869.4	<i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Arabidopsis thaliana</i> <i>Arabidopsis thaliana</i> <i>Arabidopsis thaliana</i> <i>Arabidopsis thaliana</i>	phenylalanine ammonia-lyase	NS TRINITY_DN259_c0_g2_i1; TRINITY_DN259_c0_g3_i1; TRINITY_DN259_c0_g1_i1 TRINITY_DN259_c0_g2_i1; TRINITY_DN259_c0_g3_i1; TRINITY_DN259_c0_g1_i1 TRINITY_DN259_c0_g2_i1; TRINITY_DN259_c0_g3_i1; TRINITY_DN259_c0_g1_i1 TRINITY_DN259_c0_g2_i1; TRINITY_DN259_c0_g3_i1; TRINITY_DN259_c0_g1_i1 TRINITY_DN259_c0_g2_i1; TRINITY_DN259_c0_g3_i1; TRINITY_DN259_c0_g1_i1 TRINITY_DN259_c0_g2_i1; TRINITY_DN259_c0_g3_i1; TRINITY_DN259_c0_g1_i1 TRINITY_DN259_c0_g2_i1; TRINITY_DN259_c0_g3_i1; TRINITY_DN259_c0_g1_i1	TRINITY_DN259_c0_g1_i1 TRINITY_DN259_c0_g2_i1 TRINITY_DN259_c0_g3_i1
	2	Lus10019110 Lus10027598 Lus10035011 Lus10034449 Lus10021671 NM_128601.3	<i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Arabidopsis thaliana</i>	trans-cinnamate 4-monooxygenase	TRINITY_DN2744_c0_g2_i3 TRINITY_DN2744_c0_g1_i2 TRINITY_DN2744_c0_g1_i2; TRINITY_DN2744_c0_g2_i3 TRINITY_DN2744_c0_g2_i3; TRINITY_DN2744_c0_g1_i2 TRINITY_DN2744_c0_g2_i3; TRINITY_DN2744_c0_g1_i2 TRINITY_DN2744_c0_g1_i2; TRINITY_DN2744_c0_g2_i3	TRINITY_DN2744_c0_g1_i2 TRINITY_DN2744_c0_g2_i3
STEP 2 from 4-coumarate to coniferyl alcohol 2	1	Lus10020787 Lus10024123 (CL3) ^c Lus10005390 (CL4) ^c Lus10031367 Lus10008677 (CL2) ^c Lus10007369 Lus10036994 Lus10010956 Lus10026143 (CL1) ^c Lus10002791 (CL5) ^c Lus10016135 (CL6) ^c	<i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i>	4-coumarate—CoA ligase	NS TRINITY_DN19496_c0_g4_i1 TRINITY_DN19496_c0_g4_i1 NS TRINITY_DN19496_c0_g4_i1 NS NS NS TRINITY_DN19496_c0_g4_i1 TRINITY_DN19398_c0_g2_i5; TRINITY_DN19398_c0_g2_i4 TRINITY_DN14176_c0_g1_i1	TRINITY_DN19496_c0_g4_i1 TRINITY_DN19496_c0_g3_i4 TRINITY_DN19398_c0_g2_i5 TRINITY_DN19398_c0_g2_i4 TRINITY_DN14176_c0_g1_i1 TRINITY_DN19504_c0_g1_i1

		Lus10021431 (CL7) ^c Lus10025842 (CL8) ^c Lus10038259 (CL9) ^c NM_104046.3 NM_105180.4 NM_113019.4 AY376732.1	<i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Arabidopsis thaliana</i> <i>Arabidopsis thaliana</i> <i>Arabidopsis thaliana</i> <i>Arabidopsis thaliana</i>		TRINITY_DN14176_c0_g1_i1 TRINITY_DN19504_c0_g1_i1 TRINITY_DN19504_c0_g1_i1 TRINITY_DN19496_c0_g4_i1;TRINITY_DN19496_c0_g3_i4 NS TRINITY_DN19496_c0_g4_i1;TRINITY_DN19496_c0_g3_i4 NS	
	2	Lus10027500 Lus10041591 Lus10035519 Lus10018983 Lus10031148 Lus10031149 Lus10037266 Lus10027778 Lus10028267 Lus10026097 Lus10026123 Lus10040351 Lus10039255 Lus10039256 Lus10002321 Lus10031725 NM_120869.3 NM_124270.4 NM_129556.4 NM_114887.3 AJ507825.1 ^m EF143341.1 ⁿ	<i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Arabidopsis thaliana</i> <i>Arabidopsis thaliana</i> <i>Arabidopsis thaliana</i> <i>Arabidopsis thaliana</i> <i>Nicotiana tabacum</i> <i>Coffea arabica</i>	4-coumarate—CoA ligase	TRINITY_DN3440_c0_g1_i6;TRINITY_DN3440_c0_g1_i5;TRINITY_DN3440_c0_g1_i3 NS TRINITY_DN49305_c0_g1_i1 NS TRINITY_DN3708_c0_g2_i5 TRINITY_DN3708_c0_g1_i1 NS NS TRINITY_DN7634_c0_g4_i1 TRINITY_DN26538_c0_g1_i1;TRINITY_DN13078_c0_g2_i2;TRINITY_DN13078_c0_g2_i5; TRINITY_DN13078_c0_g2_i7 TRINITY_DN26538_c0_g1_i1 NS NS TRINITY_DN3440_c0_g1_i6;TRINITY_DN3440_c0_g1_i5;TRINITY_DN3440_c0_g1_i3 TRINITY_DN26538_c0_g1_i1;TRINITY_DN13078_c0_g1_i2;TRINITY_DN13078_c0_g1_i5; TRINITY_DN13078_c0_g1_i7 TRINITY_DN3708_c0_g2_i5 NS TRINITY_DN26538_c0_g1_i1 NS NS TRINITY_DN26538_c0_g1_i1 TRINITY_DN26538_c0_g1_i1	TRINITY_DN3440_c0_g1_i6 TRINITY_DN49305_c0_g1_i1 TRINITY_DN3708_c0_g2_i5 TRINITY_DN3708_c0_g1_i1 TRINITY_DN7634_c0_g4_i1 TRINITY_DN26538_c0_g1_i1 TRINITY_DN3440_c0_g1_i5 TRINITY_DN3440_c0_g1_i3 TRINITY_DN13078_c0_g1_i2 TRINITY_DN13078_c0_g1_i5 TRINITY_DN13078_c0_g1_i7
	3	Lus10033522 Lus10035844 Lus10036627	<i>Linum usitatissimum</i> <i>Linum usitatissimum</i> <i>Linum usitatissimum</i>	p-coumaroyl ester 3'-hydroxylase	TRINITY_DN12010_c1_g3_i1;TRINITY_DN5344_c0_g2_i1 TRINITY_DN21444_c0_g1_i2 TRINITY_DN21444_c0_g1_i2	TRINITY_DN21444_c0_g1_i2 TRINITY_DN12010_c1_g3_i1 TRINITY_DN5344_c0_g2_i1

		Lus10005780	<i>Linum usitatissimum</i>		TRINITY_DN21444_c0_g1_i2	
		Lus10020849	<i>Linum usitatissimum</i>		NS	
		NM_121034.2	<i>Arabidopsis thaliana</i>		TRINITY_DN21444_c0_g1_i2	
		NM_180006.2	<i>Arabidopsis thaliana</i>		TRINITY_DN5344_c0_g2_i1	
		DQ269126.1	<i>Coffea canephora</i>		TRINITY_DN5344_c0_g2_i1	
	4	Lus10040222	<i>Linum usitatissimum</i>	caffeoyl-CoA:shikimate O-(hydroxycinnamoyl)transferase	TRINITY_DN7634_c0_g4_i1	TRINITY_DN7634_c0_g4_i1
		Lus10024809	<i>Linum usitatissimum</i>		TRINITY_DN10576_c0_g1_i1	TRINITY_DN10576_c0_g1_i1
		AJ507825.1 ^m	<i>Nicotiana tabacum</i>		TRINITY_DN26538_c0_g1_i1	TRINITY_DN26538_c0_g1_i1
		EF143341.1 ⁿ	<i>Coffea arabica</i>		TRINITY_DN26538_c0_g1_i1	TRINITY_DN13078_c0_g1_i7
		NM_124270.4	<i>Arabidopsis thaliana</i>		TRINITY_DN26538_c0_g1_i1;TRINITY_DN13078_c0_g1_i7;TRINITY_DN13078_c0_g1_i5;TRINITY_DN13078_c0_g1_i2	TRINITY_DN13078_c0_g1_i2
	5	Lus10009484	<i>Linum usitatissimum</i>	caffeoyl-CoA O-methyltransferase	TRINITY_DN15211_c1_g3_i3	TRINITY_DN15211_c1_g3_i3
		Lus10014074	<i>Linum usitatissimum</i>		TRINITY_DN11956_c0_g1_i4; TRINITY_DN11956_c0_g1_i2	TRINITY_DN11956_c0_g1_i4
		Lus10027888	<i>Linum usitatissimum</i>		TRINITY_DN11956_c0_g1_i4; TRINITY_DN11956_c0_g1_i2	TRINITY_DN11956_c0_g1_i2
		Lus10012913	<i>Linum usitatissimum</i>		TRINITY_DN11956_c0_g1_i2	TRINITY_DN59640_c0_g1_i1
		Lus10002837	<i>Linum usitatissimum</i>		TRINITY_DN11956_c0_g1_i2;TRINITY_DN11956_c0_g1_i4	
		Lus10021804	<i>Linum usitatissimum</i>		NS	
		Lus10034584	<i>Linum usitatissimum</i>		TRINITY_DN59640_c0_g1_i1	
		Lus10019841	<i>Linum usitatissimum</i>		TRINITY_DN11956_c0_g1_i4; TRINITY_DN11956_c0_g1_i2	
		Lus10010276	<i>Linum usitatissimum</i>		NS	
		Lus10036339	<i>Linum usitatissimum</i>		TRINITY_DN9212_c0_g2_i1	
		AB110168.1	<i>Oryza sativa</i>		NS	
		AF360317.1	<i>Arabidopsis thaliana</i>		TRINITY_DN11956_c0_g1_i2	
		NM_105469.2	<i>Arabidopsis thaliana</i>		TRINITY_DN11956_c0_g1_i2	
		NM_119566.5	<i>Arabidopsis thaliana</i>		NS	
	6	Lus10009549	<i>Linum usitatissimum</i>	cinnamoyl-CoA reductase	TRINITY_DN11291_c0_g4_i2	TRINITY_DN18488_c0_g1_i2
		Lus10006885 (CCR8) ^c	<i>Linum usitatissimum</i>		NS	TRINITY_DN18488_c0_g1_i1
		Lus10003780 (CCR9) ^c	<i>Linum usitatissimum</i>		NS	TRINITY_DN2679_c0_g1_i3
		Lus10008774 (CCR3) ^c	<i>Linum usitatissimum</i>		TRINITY_DN18488_c0_g1_i2;TRINITY_DN18488_c0_g1_i1	TRINITY_DN2009_c0_g1_i4
		Lus10012930 (CCR10) ^c	<i>Linum usitatissimum</i>		TRINITY_DN2679_c0_g1_i3	TRINITY_DN524_c0_g1_i1
		Lus10022239 (CCR4) ^c	<i>Linum usitatissimum</i>		TRINITY_DN18488_c0_g1_i1	TRINITY_DN3315_c0_g1_i1
		Lus10024068 (CCR2) ^c	<i>Linum usitatissimum</i>		TRINITY_DN2009_c0_g1_i4	TRINITY_DN11291_c0_g4_i2
		Lus10024138 (CCR5) ^c	<i>Linum usitatissimum</i>		TRINITY_DN2679_c0_g1_i3;TRINITY_DN3315_c0_g1_i1	

		Lus10026273 (CCR7) ^c	<i>Linum usitatissimum</i>		NS	
		Lus10030973 (CCR11) ^c	<i>Linum usitatissimum</i>		TRINITY_DN524_c0_g1_i1	
		Lus10035369 (CCR12) ^c	<i>Linum usitatissimum</i>		TRINITY_DN524_c0_g1_i1	
		Lus10041651 (CCR1) ^c	<i>Linum usitatissimum</i>		TRINITY_DN2009_c0_g1_i4	
		Lus10042399 (CCR7) ^c	<i>Linum usitatissimum</i>		TRINITY_DN524_c0_g1_i1	
		NM_001332191.1	<i>Arabidopsis thaliana</i>		TRINITY_DN524_c0_g1_i1	
		NM_119193.4	<i>Arabidopsis thaliana</i>		NS	
		NM_128919.4	<i>Arabidopsis thaliana</i>		TRINITY_DN2679_c0_g1_i3	
	7	Lus10002089 (CAD1) ^b	<i>Linum usitatissimum</i>	coniferyl alcohol dehydrogenase	TRINITY_DN15179_c0_g1_i2	TRINITY_DN15179_c0_g1_i2
		Lus10025706 (CAD2) ^b	<i>Linum usitatissimum</i>		TRINITY_DN3554_c0_g1_i7	TRINITY_DN3554_c0_g1_i7
		Lus10002812 (CAD3) ^{b c}	<i>Linum usitatissimum</i>		TRINITY_DN15135_c0_g2_i1	TRINITY_DN15135_c0_g2_i1
		Lus10027864 (CAD4) ^{b c}	<i>Linum usitatissimum</i>		TRINITY_DN15135_c0_g2_i1	TRINITY_DN15135_c0_g2_i2
		Lus10014104 (CAD5) ^{b c}	<i>Linum usitatissimum</i>		TRINITY_DN15135_c0_g2_i2	TRINITY_DN848_c0_g1_i4
		Lus10019811 (CAD6) ^{b c}	<i>Linum usitatissimum</i>		TRINITY_DN15135_c0_g2_i1	TRINITY_DN4458_c0_g1_i1
		Lus10009639	<i>Linum usitatissimum</i>		NS	TRINITY_DN2300_c0_g1_i3
		Lus10036147	<i>Linum usitatissimum</i>		TRINITY_DN848_c0_g1_i4	
		Lus10006507	<i>Linum usitatissimum</i>		NS	
		Lus10018119	<i>Linum usitatissimum</i>		TRINITY_DN848_c0_g1_i4	
		Lus10026290	<i>Linum usitatissimum</i>		NS	
		Lus10038445	<i>Linum usitatissimum</i>		TRINITY_DN4458_c0_g1_i1	
		Lus10008408	<i>Linum usitatissimum</i>		NS	
		Lus10041290	<i>Linum usitatissimum</i>		NS	
		Lus10023361	<i>Linum usitatissimum</i>		TRINITY_DN4458_c0_g1_i1	
		Lus10023373	<i>Linum usitatissimum</i>		NS	
		Lus10014363 ^c	<i>Linum usitatissimum</i>		TRINITY_DN2300_c0_g1_i3	
		Lus10010149 ^c	<i>Linum usitatissimum</i>		NS	
		Lus10026070 ^c	<i>Linum usitatissimum</i>		TRINITY_DN2300_c0_g1_i3	
		Lus10023268 ^c	<i>Linum usitatissimum</i>		TRINITY_DN3554_c0_g1_i7	
		Lus10035956 ^c	<i>Linum usitatissimum</i>		TRINITY_DN3554_c0_g1_i7	
		Lus10002302 ^c	<i>Linum usitatissimum</i>		TRINITY_DN2300_c0_g1_i3	
		Lus10002300 ^c	<i>Linum usitatissimum</i>		TRINITY_DN2300_c0_g1_i3	

Step 3 from coniferyl alcohol to matairesinol		Lus10009955 ^c	<i>Linum usitatissimum</i>		NS	
		Lus10039595 ^c	<i>Linum usitatissimum</i>		NS	
		NM_119959.4	<i>Arabidopsis thaliana</i>		TRINITY_DN3554_c0_g1_i7	
		NM_120093.5	<i>Arabidopsis thaliana</i>		TRINITY_DN15179_c0_g1_i2	
		NM_112832.4	<i>Arabidopsis thaliana</i>		TRINITY_DN15135_c0_g2_i1	
		NM_119587.4	<i>Arabidopsis thaliana</i>		TRINITY_DN15135_c0_g2_i1	
		NM_127743.4	<i>Arabidopsis thaliana</i>		TRINITY_DN15179_c0_g1_i2	
2		Lus10032331 (DIR 1) ^{d,e}	<i>Linum usitatissimum</i>	Dirigent protein	TRINITY_DN1387_c1_g2_i1	TRINITY_DN1387_c1_g2_i1
		Lus10024715 (DIR 2) ^{d,e}	<i>Linum usitatissimum</i>		TRINITY_DN1387_c1_g2_i1	TRINITY_DN1151_c0_g1_i1
		Lus10024714 (DIR 3) ^{d,e}	<i>Linum usitatissimum</i>		TRINITY_DN1387_c1_g2_i1	TRINITY_DN1151_c0_g1_i3
		Lus10017538 (DIR 4) ^{d,e}	<i>Linum usitatissimum</i>		TRINITY_DN14200_c0_g2_i1	TRINITY_DN13490_c0_g2_i1
		Lus10028749 (DIR5) ^{d,e}	<i>Linum usitatissimum</i>		TRINITY_DN15585_c0_g1_i1	TRINITY_DN14200_c0_g2_i1
		Lus10017539 (DIR6) ^{d,e}	<i>Linum usitatissimum</i>		TRINITY_DN15585_c0_g1_i1	TRINITY_DN15585_c0_g1_i1
		Lus10005062 (DIR7) ^d	<i>Linum usitatissimum</i>		TRINITY_DN6678_c0_g1_i1	TRINITY_DN16234_c0_g6_i1
		Lus10034478 (DIR10) ^d	<i>Linum usitatissimum</i>		TRINITY_DN553_c2_g1_i1	TRINITY_DN18312_c0_g1_i1
		Lus10034482 (DIR15) ^d	<i>Linum usitatissimum</i>		TRINITY_DN2578_c1_g1_i1	TRINITY_DN18312_c0_g1_i2
		Lus10025067 (DIR16) ^d	<i>Linum usitatissimum</i>		TRINITY_DN553_c2_g2_i1	TRINITY_DN2578_c1_g1_i1
		Lus10034476 (DIR18) ^d	<i>Linum usitatissimum</i>		TRINITY_DN553_c2_g2_i1	TRINITY_DN4521_c0_g1_i1
		Lus10029306 (DIR20) ^d	<i>Linum usitatissimum</i>		TRINITY_DN1151_c0_g1_i3; TRINITY_DN1151_c0_g1_i1	TRINITY_DN4521_c0_g1_i2
		Lus10016237 (DIR21) ^d	<i>Linum usitatissimum</i>		TRINITY_DN1151_c0_g1_i3; TRINITY_DN1151_c0_g1_i1	TRINITY_DN46372_c0_g1_i1
		Lus10042488 (DIR23) ^d	<i>Linum usitatissimum</i>		TRINITY_DN13490_c0_g2_i1	TRINITY_DN553_c2_g1_i1
		Lus10026176 (DIR24) ^d	<i>Linum usitatissimum</i>		TRINITY_DN13490_c0_g2_i1	TRINITY_DN6678_c0_g1_i1
		Lus10021084 (DIR27) ^d	<i>Linum usitatissimum</i>		TRINITY_DN4521_c0_g1_i1; TRINITY_DN4521_c0_g1_i2	
		Lus10011767 (DIR30) ^d	<i>Linum usitatissimum</i>		TRINITY_DN16234_c0_g6_i1	
		Lus10038298 (DIR34) ^d	<i>Linum usitatissimum</i>		TRINITY_DN46372_c0_g1_i1	
		Lus10017228 (DIR36) ^d	<i>Linum usitatissimum</i>		TRINITY_DN18312_c0_g1_i2	
		Lus10021082 (DIR37) ^d	<i>Linum usitatissimum</i>		TRINITY_DN18312_c0_g1_i1	
		Lus10029312 (DIR42) ^d	<i>Linum usitatissimum</i>		NS	
		AF210061.1 ¹	<i>Forsythia intermedia</i>		TRINITY_DN1387_c1_g2_i1	
		AAK38666.1 ¹	<i>Podophyllum peltatum</i>		TRINITY_DN1387_c1_g2_i1	
		ABR46205.1	<i>Arabidopsis thaliana</i>		NS	
		Glyma.05G213400.1	<i>Glycine max</i>		TRINITY_DN1387_c1_g2_i1	

	3 and 4	Lus10007599	<i>Linum usitatissimum</i>	Lariciresinol reductase /Pinoresinol/lariciresinol reductase	TRINITY_DN343_c0_g1_i3	TRINITY_DN343_c0_g1_i3
		Lus10010403	<i>Linum usitatissimum</i>		TRINITY_DN343_c0_g1_i3; TRINITY_DN6552_c0_g2_i1	TRINITY_DN343_c0_g1_i2
		Lus10012143	<i>Linum usitatissimum</i>		TRINITY_DN343_c0_g1_i3; TRINITY_DN6552_c0_g2_i1	TRINITY_DN6552_c0_g2_i1
		Lus10012147	<i>Linum usitatissimum</i>		TRINITY_DN343_c0_g1_i3; TRINITY_DN343_c0_g1_i2	
		EF050530.1 ^f	<i>Linum perenne</i>		TRINITY_DN343_c0_g1_i3; TRINITY_DN6552_c0_g2_i1	
		NM_102944.3	<i>Arabidopsis thaliana</i>		TRINITY_DN343_c0_g1_i3; TRINITY_DN6552_c0_g2_i1	
		AY065214.1 ^o	<i>Arabidopsis thaliana</i>		TRINITY_DN343_c0_g1_i3; TRINITY_DN6552_c0_g2_i1	
		BT002882.1 ^o	<i>Arabidopsis thaliana</i>		TRINITY_DN343_c0_g1_i3; TRINITY_DN6552_c0_g2_i1	
	4 and 5	BT004406.1	<i>Arabidopsis thaliana</i>	Secoisolariciresinol dehydrogenase	TRINITY_DN343_c0_g1_i3; TRINITY_DN6552_c0_g2_i1; TRINITY_DN343_c0_g1_i2	
		U81158.1 ^g	<i>Forsythia intermedia</i>		TRINITY_DN343_c0_g1_i3; TRINITY_DN343_c0_g1_i2	
		Lus10029368	<i>Linum usitatissimum</i>		TRINITY_DN6530_c0_g1_i4	TRINITY_DN6530_c0_g1_i4
		Lus10016179	<i>Linum usitatissimum</i>		TRINITY_DN6530_c0_g1_i4	TRINITY_DN8315_c0_g1_i1
		Lus10013594	<i>Linum usitatissimum</i>		NS	TRINITY_DN17210_c0_g1_i2
		Lus10021258	<i>Linum usitatissimum</i>		TRINITY_DN8315_c0_g1_i1	TRINITY_DN22425_c0_g1_i1
		AF352734.1 h	<i>Podophyllum peltatum</i>		TRINITY_DN17210_c0_g1_i2	
		AF352735.1 h	<i>Forsythia intermedia</i>		TRINITY_DN22425_c0_g1_i1	

Table S4. *Linum austriacum* transcripts up-regulated in the justicidin B pathway.

S te p	Enzyme	Sequence ID	Reaction	h_2	h_5	h_24	h_96
1	phenylalanine ammonia-lyase	TRINITY_DN259_c0_g2_i1	R.1.1	1.1	0.97	0.16	0.63
		TRINITY_DN259_c0_g3_i1	R.1.2	2.68	2.16	2.7	1.48
		TRINITY_DN259_c0_g1_i1	R.1.3	1.29	0.85	1.26	0.17
	trans-cinnamate 4-monooxygenase	TRINITY_DN2744_c0_g2_i3	R.2.1	3.47	3.69	2.19	0.87
2	4-coumarate—CoA ligase	TRINITY_DN2744_c0_g1_i2	R.2.2	2.62	2.12	1.38	1.28
		TRINITY_DN19496_c0_g4_i1	R.1.1	2.74	2.27	1.92	0.87
		TRINITY_DN19496_c0_g3_i4	R.1.2	1.31	0.77	0.89	0.08
		TRINITY_DN19398_c0_g2_i4	R.1.3	1.90	-0.06	0.70	-0.58
	shikimate O-hydroxycinnamoyltransferase	TRINITY_DN13078_c0_g1_i7	R.2.2	1.96	1.66	1.53	0.71
		TRINITY_DN13078_c0_g1_i5	R.2.3	2.99	1.9	1.83	0.98
		TRINITY_DN13078_c0_g1_i2	R.2.4	2.15	1.57	1.11	0.95
		TRINITY_DN3440_c0_g1_i5	R.2.6	1.15	-1.3	-0.6	-0.16
		TRINITY_DN3440_c0_g1_i3	R.2.7	-0.03	-0.32	1.32	1.48
		TRINITY_DN7634_c0_g4_i1	R.2.8	1.12	-0.24	1.51	1.24

		TRINITY_DN49305_c0_g1_i1	R.2.9	1.52	1.53	2.12	0.14
		TRINITY_DN3708_c0_g2_i5	R.2.10	3.96	3.33	1.63	0.63
	p-coumaroyl ester 3'-hydroxylase	TRINITY_DN5344_c0_g2_i1	R.3.1	1.4	1.15	1.4	0.57
	caffeoyl-CoA:shikimate O-(hydroxycinnamoyl)transferase	TRINITY_DN10576_c0_g1_i1	R.4.1	1.45	1.15	0.3	0.25
		TRINITY_DN7634_c0_g4_i1	R.4.2	1.12	-0.24	1.51	1.24
		TRINITY_DN13078_c0_g1_i7	R.4.4	1.96	1.66	1.53	0.71
		TRINITY_DN13078_c0_g1_i5	R.4.5	2.99	1.90	1.83	0.98
		TRINITY_DN13078_c0_g1_i2	R.4.6	2.15	1.57	1.11	0.95
	caffeoyl-CoA O-methyltransferase	TRINITY_DN11956_c0_g1_i2	R.5.1	0.84	0.99	1.45	0.64
		TRINITY_DN11956_c0_g1_i4	R.5.2	0.91	2.31	1.12	1.06
		TRINITY_DN15211_c1_g3_i3	R.5.3	3.9	3.19	4.14	3.1
	cinnamoyl-CoA reductase	TRINITY_DN2009_c0_g1_i4	R.6.2	1.97	1.25	0.89	1.19
	coniferyl alcohol dehydrogenase	TRINITY_DN3554_c0_g1_i7	R.7.3	3.59	1.65	-1.99	-1.40
		TRINITY_DN15135_c0_g2_i1	R.7.5	0.64	0.36	1.75	1.64
3	Dirigent protein	TRINITY_DN1387_c1_g2_i1	R.2.2	4.36	3.77	5.53	3.49
		TRINITY_DN18312_c0_g1_i1	R.2.8	1.38	1.59	1.06	2.81
	Lariciresinol reductase /Pinoresinol/lariciresinol reductase	TRINITY_DN343_c0_g1_i3	R.3_4.1	4.89	4.34	5.69	3.52
		TRINITY_DN6552_c0_g2_i1	R.3_4.2	2.14	0.55	1.22	-1.18
		TRINITY_DN343_c0_g1_i2	R.3_4.3	4.75	4.62	5.45	2.48
	Secoisolariciresinol dehydrogenase	TRINITY_DN8315_c0_g1_i1	R.5_6.6	3.14	2.11	2.94	1.64
		TRINITY_DN17210_c0_g1_i2	R.5_6.7	0.58	3.38	-1.17	4.24