

Supplementary Table S1. List of designed primers

Gene	Sequence (5'→3')		Accession Number	T _m [°C]
	Forward	Reverse		
<i>EF</i>	ATTGGAAACGGATATGCTCCA	TCCTTACCTGAACGCCTGTCA	AB061263	53
<i>18s rRNA</i>	GGGCATTTCGTATTTTCATAGTC AGAG	CGGTTCTTGATTAATGAAAACAT CCT	X67238	60
<i>CLF</i>	TCCTCAGTGTGCTAGTCATGG	ATGCTTCCTACCTGGCATCTG	XM_006361673	54
<i>HSR203J</i>	AGGAGCTTAAATTGCCGCCT	TCCCACGCCGTTGTTTATCA	PGSC0003DMG400021128	53
<i>NPRI</i>	GCTGAACTTGGTCTACAAGG	TCATCGAGAGTAGTATGCC	PGSC0003DMG400010635	53
<i>Pitefl</i>	ATGACTCGCCTCGGTGATTA	TCCACACACACAAAGTGCATCA	XM_0029 04671.1	60
<i>PRI</i>	AAGACTATCTTGCGGTTAC	TCTCCTGCACCTGAATGAA	PGSC0003DMG400005110	54
<i>PRMT5</i>	GGAACAACAACCCCTCGTCAC	GGAAGACAATTCGGTGCATAAAT AA	PGSC0003DMG401003285	60
<i>R3a</i>	AGCCAACTGGTGAGATTAGT	ATCCTGTACCCACAATTTGC	PGSC0003DMG400009455	53
<i>TrxG</i>	CAACTTGCGTGTTATTGTGG	ATACAGCTTTGCCATTTCGTT	XR_368704	53
<i>WRKYI</i>	TTTCTTCAGCATCATCGTC	TTCCATGCTTGCCATTAGTC	PGSC0003DMT400056725	54

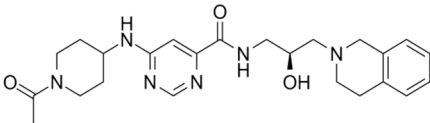

Supplementary Table S2. List of designed primers for ChIP-qPCR (promotor sequence) analyses

Gene	Sequence (5'→3')		Accession Number	T _m [°C]	Promotor region sequence +500bp
	Forward	Reverse			
<i>HSR203J</i>	AGGAGCT TAAATTG CCGCCT Start: 40 Stop: 61	TCCCACG CCGTTGT TTATCA Start: 135 Stop: 114	PGSC0003DMG4000 21128	56	gaagatacaaagagttttacaaaaatttgactttagatagtggaagagtaaaggcatt gacagatcattttctacacaatttcctaagtggtcattccacttatagatttcgtcca catttacaactggaatataagaaagactttgttaagatccaaataataggacgttataa cgagagtactctctctgtccaacaatactattttaatgtattaaaaatagttgttaat gatacgtgttactttatgaagttcattgataattttacacttacttctaatttactct tatcattaattatagacattttctcattatattttcaagatattttattattatatt aaagggtgatatgataaaattatccttctatttatagtttcttaaagggtgtgtgatgtg ttaagtcaataatggataaattagataatacagaaaaatattctaagagaatcataattt ttttatatgattttaatcact
<i>NPRI</i>	GCTGAAC TTGGTCT ACAAGG Start: 52 Stop: 74	TCATCGA GAGTAGT ATGCC Start: 148 Stop: 129	PGSC0003DMG4000 10635	55	tcacattatttgtaatttcattaattgtatcctctttttctctagtttgctatgcct tttatgtgagtcgaagatctatcgaaaataacatctctatttcataagataaaaaataagg ttgcgtataactactctcctcgcacccattttgtgaagtcacactgaatatgcatgtgt tcaaatagtaactaaaacaaataaaataaaatagagagtatggaagtcaataattagtaa tcgtgctatttaatttctctttccatattattgttggtgctgctgatattttctatcgt gtttccttttatttttatctgagccaagagtatatcgaaaatattctctcttaacttc

					<p>aaataagactgcatacatcactctttcaagatctcactcgtgtaatttcattaaatat</p> <p>gttattgttacttatattccctttttctttgttaatacctcagccgccagaagaac</p> <p>catccatattgctccaccctc</p>
<i>PRI</i>	<p>AAGACTA TCTTGCG GTTTAC</p> <p>Start: 119 Stop: 139</p>	<p>TCTCCTG CACCTGA ATGAA</p> <p>Start: 192 Stop: 170</p>	PGSC0003DMG4000 05110	57	<p>gacttgactcagaaaacatagaggatcatttaacaatataaaaacttttaaaaaaa</p> <p>gaacaaattaaattgctcgaatattgttactagtagtagtatatctgtggttaaaatt</p> <p>tctgcagaaggcagaacaaaatttaattgtccaatcaattatatattctcaccaaatcc</p> <p>tacgtttcatcttctttcattaattatatagtactcctagtaacggataatagtaatgg</p> <p>taattagggagtcaatatatatagtgaaacatcaaaaataaagaaatgttacgttataga</p> <p>tattcatcaaacttaagaacgatttatttactatagtttttttttttgctattcaa</p> <p>aattggctaaaaatttgccaattaaaagctagtaaccgttcaattaataattcttttac</p> <p>aacttgcaaaacttttaaaactcagcattcttatttcttcctattaaaatttaaaacccat</p> <p>ctatgttctcattaaaactca</p>

<i>R3a</i>	AGCCAAC TGGTGAG ATTAGT Start: 240 Stop: 260	ATCCTGT ACCCACA ATTTGC Start: 382 Stop: 363	PGSC0003DMG4000 09455	56	ttctgaaatctgcaaagcaaacacaaaatgattttaagaaatttgagaagatgaatgtt tctatcttcaattactaacaactttactttacctgttgaatgctaagagtaatttgcaaa caagaatgatcactgatttctctctcttttgctagtaaatttgcaaacaacaagttgt aactatgtttgctagtgcctattcattgctttctcaattgagtaattgagggtagtggg ggacgttgacaaaatggggaccatttagacaccaaagtcttgatcatttaaacatcaa tacaagggtcaattgtgctattttgacatttttgctaatcagccaaatcgttaaagt gtgcaacacactcgcggataacatctcaatatttgcaaaaatgacaaaattact tccatattgaattgcacaaattactttcctggggtgttgacaattaatgagtcctgtt ttaaggctttagtccttatt
<i>WRKY1</i>	TTTCTTC AGCATCA TCGTC Start: 122 Stop: 141	TTCCATG CTTGCCA TTAGTC Start: 236 Stop: 218	PGSC0003DMT4000 56725	57	ttttttgagagatgaaacggaaagaggtatataaaaggttgagatgaagactaaaaaaaa aaaagtggtgcaaaagagaagattttgataaaataaacgtaagggtggtgcgtcaaggg tgggcaagtgggaccaagtataaaaaattgtcaagactgagattgacttgttcgcattaa agtaaagagaaaagagaagaagaagaagatgaaaccaccggcccgactagtaaggcgtg atgaaaatgaaaatgaaaaggtagctagtagtgacaacaaagtcaactagttttaagcac aaatttctcgcctcacttacgacttgggtattagctaattcatccaccgttcaattta tataaattagtttaaattcatataaaattttagaaggaaataatgatttttcaaatttat agtctgaaataaataatcccaaaaaatgtaataaataaataaaatattaccacccaccc ctaccatcnnnnnnnnnnnnnnnnn

Supplementary Table S3. Structure of arginine methyltransferase 5 (PRMT5) inhibitor and the effect of potato leaf treatment with GSK3326595

Name	Chemical Structure	No symptoms of cytotoxicity (72 h after the treatment)
<p>GSK3326595 (EPZ015938)</p> <p>CAS No. 1616392-22-3</p>		 <p>(-) inhibitor (+) inhibitor</p>