

## Genome-wide *in silico* screening of genetic variability of microRNA genes in seven plant species

Fekonja Simon, Zorc Minja, Kunej Tanja \*

**Supplementary Fig. 1** Genetic variability of miRNA genes in six plant species displayed using the miRNA SNIper tool 5.0. The figure shows polymorphisms within miRNA genes in: maize *zma-MIR395g* (A), rice *osa-MIR5544* (B), grape *vvi-MIR169n* (C), tomato *sly-MIR9479* (D), false purple brome *bdi-MIR7767* (E), and sorghum *sbi-MIR6228* (F).

Integromics TIME <span style="float:right">Home About Tutorial Catalog</span>							
miRNA SNIper							
A tool for identification of genetic variations residing within microRNA genes.							
Search		Results					
Result table		Summary					
Show miRNAs with:							
<input checked="" type="checkbox"/> no variations							
<input checked="" type="checkbox"/> variation(s) in pre-mature miRNA							
<input checked="" type="checkbox"/> variation(s) in mature miRNA							
<input checked="" type="checkbox"/> variation(s) in seed region							
A	<b>zma-MIR395g</b>	Zea mays 2:6322460-6322525[-]		zma-miR395g-5p <b>Mature:</b> 6322503-6322524 <b>Seed:</b> 6322517-6322523 AGUUUCUUGCAAGCAGUUCACGAGCAUU GUUUCAAAGCUUUUGUGAAGUGUUUGGG GGAACUCU	PZE0206307039 PZE0206307043	In pre-mature 6322461 SNP (G/A)  In pre-mature 6322465	
	B	<b>osa-MIR5544</b>	Oryza sativa 2:19334838-19335042[+]		osa-miR5544 <b>Mature:</b> 19335011-19335032 <b>Seed:</b> 19335012-19335018 UUGUUGUACACCAUUUCACAUUUGUUUUU CAUACACCAUUAUUUUUUCUUAAGUAACAAAU CUUACCAUGCUUAGAUUUCAGCCUUAU UGUCAUAUUUUGUUCUAUUUUGCACCUU GUGAAUCCAUJAGGUUUGUUGUUGUCG AUACUUGGAGCAUCGUUUGGAGUAAGACG GGAGUAGAAUGUGGUGUCAUUCAGC	rs53874770 rs17962020 rs53027014	In pre-mature 19334845 SNP (G/A)  In pre-mature 19334860 SNP (T/C)  In pre-mature 19334888
C		<b>vvi-MIR169n</b>	Vitis vinifera 11:16380240-16380340[+]		vvi-miR169n <b>Mature:</b> 16380251-16380271 <b>Seed:</b> 16380252-16380258 UUGAGUGGAAUAGGCAAGAUACUUGC CCGCAACUGACGCAAGGCAUAGGGUUUAAC UGGUCALUACUGGCAAGCAUCUGAGGCUC UAUUUACCCUCU	ENSVVVI00374835 ENSVVVI00374836	In pre-mature 16380248 SNP (A/T)  In pre-mature 16380249 SNP (T/A/C)
		D	<b>sly-MIR9479</b>	Solanum lycopersicum 5:64278750-64278999[+]		sly-miR9479-5p <b>Mature:</b> 64278797-64278818 <b>Seed:</b> 64278798-64278804 GAGGGUAGUGGCACCGGCUUAGUUUAUA UGAUCGGUUUAUAACCAAGUCCGCCCCUA CCCUUCUCCACUUAAAAGACCAAGCUUGUC UACAACAAGGUUCCAAUUCUAGGCAAAACAU UGAUUGUGUAGUUUAGGCAAGUUCAGGG UUCAAAUUUAUACCAAGCAAAAUUAGUGU AUUUUAAGUGGAAUUGUJAGAGGUGUGCA CCAUUAUCUACCGAGUUUCUACCCUGCA CCACUAGCCUC	vcZ1F1PI vcZ1F1PJ vcZ1F1PK
E	<b>bdi-MIR7767</b>		Brachypodium distachyon 4:9597515-9597625[-]		bdi-miR7767-5p <b>Mature:</b> 9597595-9597615 <b>Seed:</b> 9597608-9597614 UUUGAUGGCUUCGCAAGCUGAGAGCUCUC CCAGCAGCUGGACAGGAGGCCACCUUG CUUGCAAGAGCUCGGAUUGAGGAGGAGCAA GCAGCUUAGGUGGUGGAGGACC	tmp_4_9597553 tmp_4_9597554	In pre-mature 9597553 SNP (C/T)  In pre-mature 9597554 SNP (C/G)
	F		<b>sbi-MIR6228</b>	Sorghum bicolor 2:64555234-64555314[-]		sbi-miR6228-5p <b>Mature:</b> 64555286-64555309 <b>Seed:</b> 64555302-64555308 GCAGUUCUAUCUUAUUAAUUGUGUUGC CAACUCAUCAUUUGCUGCUGUGGGCAGUA GAAUUAUGAAGGAGAGAGUGC	tmp_2_64555245_C_T tmp_2_64555267_G_T

**Supplementary Table 1.** Location and nucleotide sequence of multiple nucleotide length polymorphisms (MNLPs) in mouse-ear cress (*Arabidopsis thaliana*) miRNA genes.

miRNA name, polymorphism name	Location and nucleotide sequence of multiple nucleotide length polymorphisms within miRNA gene
<i>ath-MIR8166</i> ENSVATH10335872	In pre-mature TAAAA/GAGGGAGTATTTTCAG
<i>ath-MIR404</i> ENSVATH10339690	In pre-mature AGCGTCT/W
<i>ath-MIR404</i> ENSVATH10339691	In pre-mature TAGTGTT/C
<i>ath-MIR5025</i> ENSVATH10345664	In pre-mature CTCG/T
<i>ath-MIR5025</i> ENSVATH10345666	In pre-mature GT/A
<i>ath-MIR8180</i> ENSVATH10359864	In seed AATGAGTCTGAATGATGACTGCGTTTTGCGG/TATTCAAC
<i>ath-MIR5646</i> ENSVATH10362004	In pre-mature GGAGATTTAGTAT/CTGAGAAATTTACCAC
<i>ath-MIR5013</i> ENSVATH10375686	In pre-mature AGTAGACAAGGTTTGTGACATCTAGGTGCTTTTTTTTTTTC TTCTATAAACAAGAGCACCTAGATATCATAAACCTTGTC TACTAAATGACATCTAGGTGCTTGTTGTGCTTACAGTTC TATTATTTATGTTAC/T
<i>ath-MIR831</i> ENSVATH10385973	In pre-mature TTGTGAATCACCAAAAACAAGTGGTTTTGGTTTG/ATA
<i>ath-MIR5655</i> ENSVATH10401473	In pre-mature TTTTTCGAGTTAGTCAAGATCTAATTAAGACCAAAGTGCT TGCCACAAGAAAAGGAGAAGTAGGGTTCTCAATTATT ACTAGAGAGATGTCTCTTTCTCTTTATTTTTTCCACGTT/A AACC
<i>ath-MIR5645c</i> ENSVATH10398693	In pre-mature GA/T
<i>ath-MIR5638a</i> ENSVATH10400848	In pre-mature GA/TTACTTGAAGTTTKW
<i>ath-MIR5651</i> ENSVATH10412482	In pre-mature TGGCTCCGAATGGAGACGTGCAGTTCAACTGCGGATAA AGTGTTGTGCGGTTCAAATAGTAACAAAAATATATACAT ACATATATATGTAAAGAATTTTCGTTACTATTTGAATCGT ACTGCACTGTACGGTTCGGTCACCATTTCGAAGC/A
<i>ath-MIR165b</i>	In pre-mature

ENSVATH10364079	TG/CATTCCCCA
<i>ath-MIR826a</i>	In pre-mature
ENSVATH10367727	GTGTATCTTATCATCTTTTTCTGC/CTTCTTTTTCCGT
<i>ath-MIR447b</i>	In pre-mature
ENSVATH15585039	GGG/A
<i>ath-MIR832</i>	In pre-mature
ENSVATH10389188	GTCATCTCACAAGGTGGCTAAG/A
<i>ath-MIR824</i>	In pre-mature
ENSVATH10415952	TTAGTGATCTGTTCCCCAAACCCCATTC AATAAGAAAG GTCTACCTGTAGCTCACAGTCACAGCTATTAGAGCTGTC CTTGCTTCTTTGGGTTTACTGTTTTAGTTAATTAGTTACC CTATGAA/CT
<i>ath-MIR824</i>	In pre-mature
ENSVATH10415954	AAACCCCATTC AATAAGAAAGGTCTACCTGTAGCTCAC AGTCACAGCTATTAGAGCTGTCCTTGCTTCTTTGGGTTA CTGTTTTAGTTAATTAGTTACCCTATGAAAG/TTGATAT
<i>ath-MIR824</i>	In pre-mature
ENSVATH10415953	AAACCCCATTC AATAAGAAAGGTCTACCTGTAGCTCAC AGTCACAGCTATTAGAGCTGTCCTTGCTTCTTTGGGTTA CTGTTTTAGTTAATTAGTTACCCTA/T
<i>ath-MIR8178</i>	In pre-mature
ENSVATH10422654	GA/C
<i>ath-MIR865</i>	In mature
ENSVATH15635546	CT/G
<i>ath-MIR156f</i>	In pre-mature
ENSVATH10389485	CCTCTCCCTCTCTCT/A
<i>ath-MIR156f</i>	In pre-mature
ENSVATH10389486	CCTCTCCCTCTCTCTCTCTCTCTCTACAGCATTTCATTTA GTTTTAGAGTTAAACATTTTGATTTGATTT/TCAC
<i>ath-MIR824</i>	In pre-mature
ENSVATH10415951	TAAAACCT/AAGTAGTATC
<i>ath-MIR8177</i>	In mature
ENSVATH10390657	GTATAAATG/A
<i>ath-MIR5665</i>	In pre-mature
ENSVATH10424115	CAAGTTATATCATATTATCTTGTCTACC/AACCCG
<i>ath-MIR405b</i>	In pre-mature
ENSVATH10425106	GTTGGG/A

**Supplementary Table 2.** Location and nucleotide sequence of multiple nucleotide length polymorphisms (MNLPs) in mouse-ear cress (*Solanum lycopersicum*) miRNA genes.

miRNA name, polymorphism name	Location and nucleotide sequence of multiple nucleotide length polymorphisms within miRNA gene
<i>sly-MIR399</i> vcZ153U1I	In pre-mature TGCA/TGCAGCTATTTTGGTCGCTCCAAGTAGCA/TGCAG CTTTTTTTGGTCGCTCCGAGTAGCA/TGCAGCTTTTTTGG TCGCTCGAAGTAGCA
<i>sly-MIR6026</i> vcZWN8OH	In pre-mature CT/C
<i>sly-MIR171a</i> vcZ144IND	In pre-mature TGAAAGAGAAA/TGAAAGAGAAAGAGAAA
<i>sly-MIR164b</i> vcZ11ICLA	In pre-mature CTTGTATATATGTGTTT/C
<i>sly-MIR5304</i> vcZ11SOZZ	In seed GCT/GCTCT
<i>sly-MIR167b</i> vcZ13MSCK	In pre-mature TTAC/T