

## Supplementary material:

Table 1: Predicted miRNAs of *R.sativus*

New miRNAs	EST ID	Mature sequence	NM	ML	LP	Location	A+U (%)	MFEI
rsa-miR156a	332792699	GCUCACUGCUCUCUCUGUCAG	1	21	81	3	42.85	2.08
rsa-miR156b	332792699	CUGACAGAAGAGAGUGAGCAC	2	21	81	5	47	2.08
rsa-miR156c	332792699	GCUCACUGCUCUCUCUGUCAGA	1	22	83	3	45.45	2.16
rsa-miR156d	332792699	UGACAGAAGAGAGUGAGCAC	0	21	79	5	52	1.95
rsa-miR156e	332792699	GCUCACUGCUCUCUCUGUCA	0	20	79	3	45	1.95
rsa-miR156f	332792699	UGACAGAAGAGAGUGAGCAC	0	20	79	5	50	1.95
rsa-miR156g	332792699	GACAGAAGAGAGUGAGCA	0	18	77	5	50	1.87
rsa-miR156h	332792699	UGACAGAAGAGAGUGAGCA	1	19	79	5	52.63	1.95
rsa-miR156i	332792699	GACAGAAGAGAGUGAGCAC	0	19	77	5	47.36	1.87
rsa-miR160	158915937	GCCUGGCUCUCCUGUAUGCCA	0	21	77	5	38.09	2.05
rsa-miR160a	158915937	GCGUAUGAGGAGCCAAGCAU	1	21	83	3	47	2.25
rsa-miR160b	158915937	UGCCUGGCUCUCCUGUAUGCCA	0	21	79	5	38.09	2.14
rsa-miR160c	158915937	UGCCUGGCUCUCCUGUAUGCC	0	20	79	5	35	2.14
rsa-miR160d	158915937	UGCCUGGCUCUCCUGUAUGCCA	1	22	79	5	40.90	2.14
rsa-miR160e	158915937	GCCUGGCUCUCCUGUAUGCCA	0	20	77	5	35	2.05
rsa-miR160f	158915937	GCCUGGCUCUCCUGUAUGCC	1	19	77	5	31.57	2.05
rsa-miR162	167433042	UGGAGGCAGCGGUUCAUCGAUC	0	22	101	5	40.90	1.73
rsa-miR162a	167433042	GGAGGCAGCGGUUCAUCGAUC	0	21	99	5	38.09	1.65
rsa-miR162b	167433042	UCGAUAAAACCUUGCAUCCAGC	0	22	105	3	50	2.03
rsa-miR162c	167433042	UCGAUAAAACCUUGCAUCCA	0	20	101	3	55	1.73
rsa-miR162d	167433042	UCGAUAAAACCUUGCAUCCAG	1	21	103	3	52.38	1.86
rsa-miR162e	167433042	UCGAUAAAACCUUGCAUCC	0	19	99	3	52.63	1.65
rsa-miR167a	158916067	GAUCAUGUUUGCAGUUUCACC	1	21	99	3	57.14	2.25
rsa-miR167b	158916067	UGAAGCUGCCAGCAUGAUCUA	0	21	97	5	52	2.23
rsa-miR167c	158916067	UGAAGCUGCCAGCAUGAUCUA	0	22	97	5	54	2.23
rsa-miR167d	158916067	AAGCUGCCAGCAUGAUCUA	0	19	93	5	52.63	2.00
rsa-miR170	166132096	UAUUGGCCUGGUACACUCAGA	0	21	83	5	52.38	1.34
rsa-miR171a	166132096	GAUUGAGCCGCGCCAAUAUC	0	20	87	3	45	1.54
rsa-miR171b	166132096	UGAUUGAGCCGCGCCAAUAUC	0	21	87	3	47.61	1.54
rsa-miR171c	166132096	UUGAGCCGCGCCAAUAUC	0	18	87	3	44.44	1.54
rsa-miR171d	166132096	GAUUAUUGCCGCGCCAAUAUC	1	20	87	3	45	1.54
rsa-miR171e	166132096	UGAUUGAGCCGCGCCAAUAUC	0	20	85	3	50	1.40
rsa-miR171f	166132096	GAUUGAGCCGCGCCAAUAUC	0	18	83	3	44.44	1.34
rsa-miR171g	166132096	UGAUUGAGCCGCGCCAAUAUCU	0	22	89	3	50	1.60
rsa-miR319a	332773864	UUGGACUGAAGGGAGCUCC	0	19	177	3	42	3.60
rsa-miR319b	332773864	UUGGACUGAAGGGAGCUC	1	18	175	3	44.44	3.44
rsa-miR319c	332773864	GGAGAUUCUUUCAGUCCA	0	18	177	5	55.55	3.60
rsa-miR319d	332773864	UUGGACUGAAGGGAGCUCCU	0	21	181	3	47.61	3.73
rsa-miR319e	332773864	UUUGGACUGAAGGGAGCUCU	0	21	179	3	47.61	3.68
rsa-miR319f	332773864	UUUGGACUGAAGGGAGCUC	0	19	175	3	47.36	3.44
rsa-miR319g	332773864	UUGGACUGAAGGGAGCUCU	0	20	179	3	45	3.68
rsa-miR396a	166139020	UUCCACAGCUUCUUGAAC	1	19	122	5	57	1.79
rsa-miR396b	166139020	GCUCAAGAAAGCUGUGGGAAA	0	21	126	3	52.38	1.88
rsa-miR396c	166139020	UUCCACAGCUUCUUGAACU	0	21	122	5	61.90	1.79
rsa-miR396d	166139020	UUCCACAGCUUCUUGAACU	0	20	122	5	60	1.79
rsa-miR396e	166139020	UCAAGAAAGCUGUGGGAA	0	18	124	3	55.55	1.84
rsa-miR396f	166141534	GUUCAAGAAAGCUGUGGAA	0	19	120	3	57.89	2.53
rsa-miR399a	166146391	AAGAUCUCUAUUGGCAGG	0	18	89	5	55.55	2.08

NM=Number of Mismatch, ML=Length of Mature miRNAs, LP=Length of Precursor, MFEI=Minimal free energy index

Table 2: Potential targets of the identical miRNAs in *R.sativus*

miRNAs	Targeted gene	Targeted protein	Possible function
miR156	EY930450	squamosa promoter-binding protein	transcription factor
	EW715846	squamosa promoter-binding protein	transcription factor
	EX898839	squamosa promoter-binding protein	transcription factor
	FD950281	SMC (structural maintenance of chromosomes) protein	organizing and segregating chromosomes for partition
miR167	FY434046	DNA binding protein	Transcription Factor
	DN910345	DNA binding protein	Transcription Factor
	DY64102	DNA binding protein	Transcription Factor
miR396	EW713403	Thioredoxin super family	Transcription factor
	EW713404	Thioredoxin super family	Transcription factor
	EW718331	Thioredoxin super family	Transcription factor
	EW718591	Thioredoxin super family	Transcription factor
	EW733484	Thioredoxin super family	Transcription factor
	FD563793	Thioredoxin super family	Transcription factor
	FD941766	Thioredoxin super family	Transcription factor
	FD939455	Thioredoxin super family	Transcription factor
	FY442946	Thioredoxin super family	Transcription factor