

TABLE I  
TaqMan® assays

miRNA	Assay ID	Assay name
miR-8	000269	dme-miR-8
miR-92	241870_mat	dpu-miR-92
miR-184	000290	dme-miR-184
miR-315	000325	dme-miR-315
miR-375	007201_mat	aca-miR-375
miR-750	008337_mat	cte-miR-750
miR-1984	006673_mat	hru-miR-1984
U6 snRNA	001973	U6 snRNA

TABLE II  
Genome and transcriptome localisation of *Biomphalaria glabrata* miRNAs

Pre-miRNA	Contig or scaffold	Start	End	Strand	Database
bgl-bantam	LGUN_random_Scaffold555467	2058	2133	minus	Genome
bgl-let-7	LGUN_random_Scaffold446	100296	100363	minus	Genome
bgl-miR-1a	LGUN_random_Scaffold313	141974	142081	minus	Genome
bgl-miR-2a-1	LG6_random_Scaffold1244	15480	15569	plus	Genome
bgl-miR-2a-2	LG6_random_Scaffold1244	16119	16204	plus	Genome
bgl-miR-2b	LG6_random_Scaffold1244	15776	15874	plus	Genome
bgl-miR-2d	LG6_random_Scaffold1244	15674	15762	plus	Genome
bgl-miR-7	LGUN_random_Scaffold1659	33266	33359	plus	Genome
bgl-miR-8	LG3_random_Scaffold555	179139	179237	minus	Genome
bgl-miR-9a	LGUN_random_Scaffold370	127677	127751	minus	Genome
bgl-miR-9b	LGUN_random_Scaffold370	127677	127751	plus	Genome
bgl-miR-12	LGUN_random_Scaffold18	762312	762388	plus	Genome
bgl-miR-29a	LGUN_random_Scaffold532	101201	101301	minus	Genome
bgl-miR-29b	LGUN_random_Scaffold532	117297	117383	minus	Genome
bgl-miR-33	LGUN_random_Scaffold1923	29991	30077	plus	Genome
bgl-miR-34	LG26_random_Scaffold796	58910	58997	plus	Genome
bgl-miR-36a	LGUN_random_Scaffold551705	952	1043	plus	Genome
bgl-miR-67-1	LGUN_random_Scaffold175600	277	358	minus	Genome
bgl-miR-67-2	LGUN_random_Scaffold6774	14221	14302	minus	Genome
bgl-miR-71	LG6_random_Scaffold1244	15354	15442	plus	Genome
bgl-miR-72	LG24_random_Scaffold169	50436	50520	plus	Genome
bgl-miR-87b-1	LGUN_random_Scaffold538	17530	17635	minus	Genome
bgl-miR-87b-2	LGUN_random_Scaffold538	21935	22033	minus	Genome
bgl-miR-92	LGUN_random_Scaffold36250	1201	1300	minus	Genome
bgl-miR-92a	LGUN_random_Scaffold4152	19817	19905	minus	Genome
bgl-miR-92a-1	LGUN_random_Scaffold4152	20211	20307	minus	Genome
bgl-miR-92b	LGUN_random_Scaffold36250	103	192	minus	Genome
bgl-miR-96a	LGUN_random_Scaffold45	468626	468699	plus	Genome

Pre-miRNA	Contig or scaffold	Start	End	Strand	Database
bgl-miR-96b	LG4_random_Scaffold36	489389	489476	plus	Genome
bgl-miR-100	LGUN_random_Scaffold446	93669	93762	minus	Genome
bgl-miR-124	LGUN_random_Scaffold540242	3321	3417	minus	Genome
bgl-miR-125	LGUN_random_Scaffold446	104272	104360	minus	Genome
bgl-miR-133	LGUN_random_Scaffold313	111956	112046	minus	Genome
bgl-miR-137	LGUN_random_Scaffold162	214432	214517	minus	Genome
bgl-miR-153	LGUN_random_Scaffold671	116601	116698	minus	Genome
bgl-miR-184	LGUN_random_Scaffold26723	1552	1675	plus	Genome
bgl-miR-190	LG2_random_Scaffold42	62684	62774	minus	Genome
bgl-miR-193	LG2_random_Scaffold42	420501	420584	minus	Genome
bgl-miR-199a	LGUN_random_Scaffold26964	1961	2054	minus	Genome
bgl-miR-216a	LGUN_random_Scaffold18	759287	759363	plus	Genome
bgl-miR-216b	LGUN_random_Scaffold18	757131	757202	plus	Genome
bgl-miR-219a	LGUN_random_Scaffold276	211507	211604	minus	Genome
bgl-miR-252a	LGUN_random_Scaffold20250	2987	3085	minus	Genome
bgl-miR-252b	LGUN_random_Scaffold7055	558	648	minus	Genome
bgl-miR-277a	LG26_random_Scaffold796	46625	46724	plus	Genome
bgl-miR-278	LGUN_random_Scaffold5083	7879	7980	plus	Genome
bgl-miR-279	LGUN_random_Scaffold3355	16180	16272	plus	Genome
bgl-miR-281	LG24_random_Scaffold115	29213	29283	plus	Genome
bgl-miR-315	LGUN_random_Scaffold550284	2385	2464	minus	Genome
bgl-miR-317	LG26_random_Scaffold796	31870	31967	plus	Genome
bgl-miR-375	LGUN_random_Scaffold682	129296	129395	minus	Genome
bgl-miR-745a	LGUN_random_Scaffold1067	13642	13735	minus	Genome
bgl-miR-745b	LGUN_random_Scaffold1067	13253	13328	minus	Genome
bgl-miR-750	LGUN_random_Scaffold448	178337	178436	minus	Genome
bgl-miR-981	LGUN_random_Scaffold2747	35119	35200	plus	Genome
bgl-miR-1175	LGUN_random_Scaffold448	170932	171027	minus	Genome
bgl-miR-1260	LGUN_random_Scaffold121	296099	296174	plus	Genome
bgl-miR-1984	LG3_random_Scaffold688	139863	139942	minus	Genome
bgl-miR-1985	LG3_random_Scaffold688	136038	136125	minus	Genome
bgl-miR-1986	LGUN_random_Scaffold828	164246	164322	plus	Genome
bgl-miR-1990	LGUN_random_Scaffold828	160164	160258	plus	Genome
bgl-miR-1991	LGUN_random_Scaffold2012	1834	1928	plus	Genome
bgl-miR-1992	LGUN_random_Scaffold126	219037	219133	minus	Genome
bgl-miR-1993	LGUN_random_Scaffold24466	814	884	minus	Genome
bgl-miR-1994a	LGUN_random_Scaffold2100	47010	47095	minus	Genome
bgl-miR-1994b	LGUN_random_Scaffold2100	46368	46454	minus	Genome
bgl-miR-2001	LGUN_random_Scaffold7055	11299	11398	minus	Genome
bgl-miR-2722	LGUN_random_Scaffold2019	53436	53507	plus	Genome

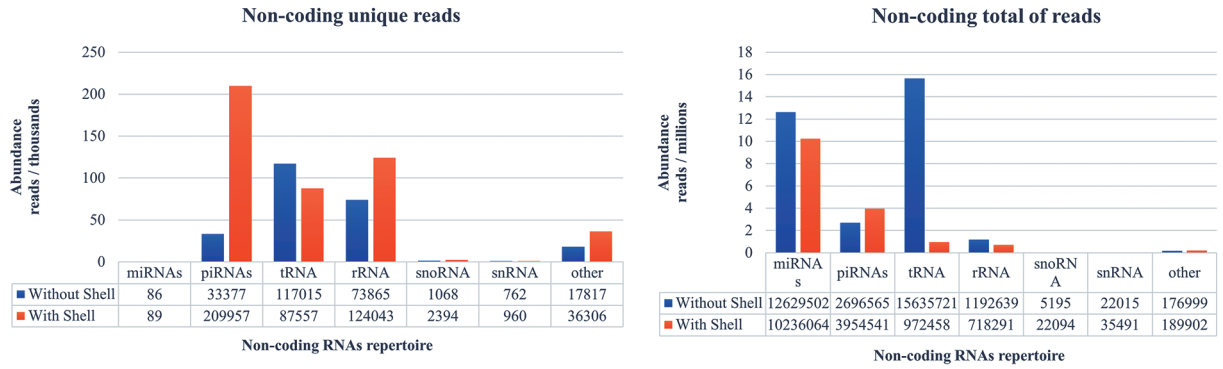


Fig. 1: profile of small RNAs of *Biomphalaria glabrata* compared to Rfam database. (A) unique reads for *B. glabrata* small RNA sequencing with and without shell. (B) total of reads for *B. glabrata* small RNA sequencing with and without shell.

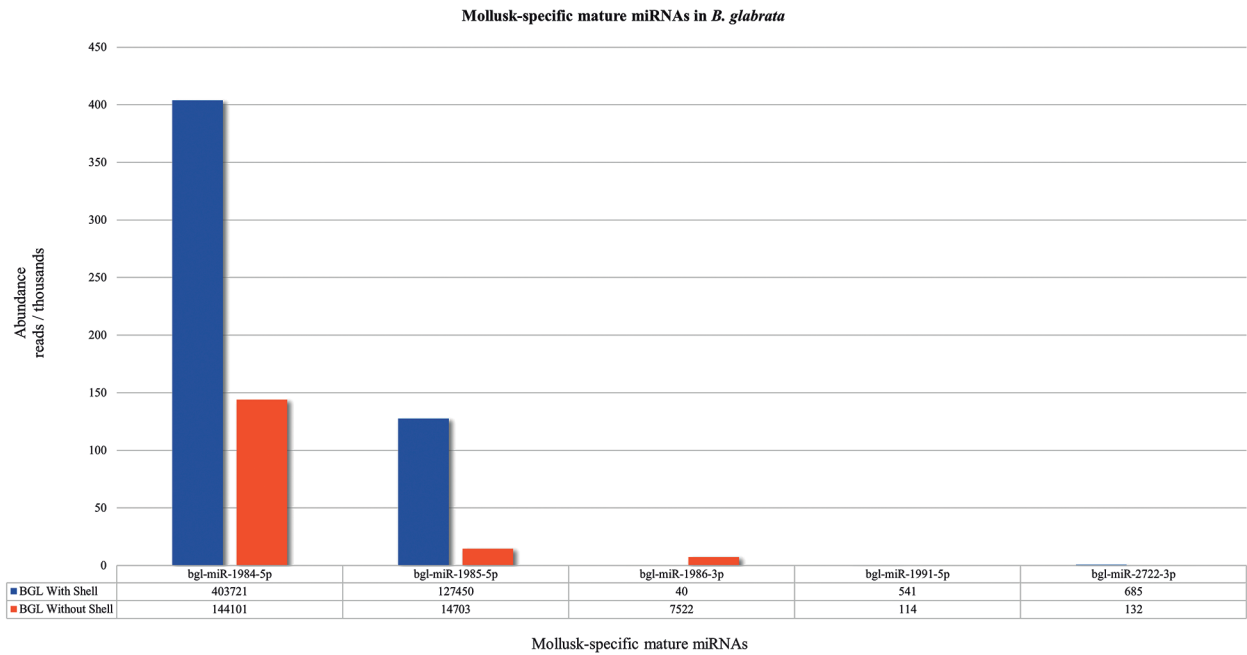


Fig. 2: characterisation of mollusk-specific miRNAs in *Biomphalaria glabrata*. The abundance of mature miRNAs shows a large difference between samples with and without shell, except for bgl-miR-1986-3p that is more representative on mollusks without shell.

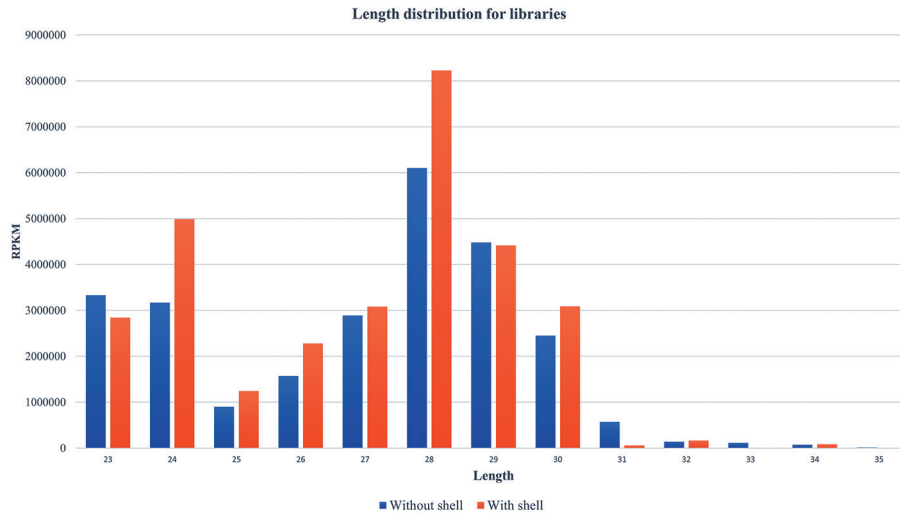


Fig. 3: length distribution at the range of Bgl-piRNAs for small-RNAseq libraries. The libraries of small-RNAseq of *Biomphalaria glabrata* filtered at the range of 23 to 35 nucleotides with large distribution of the reads of 28 and 29 nucleotides.

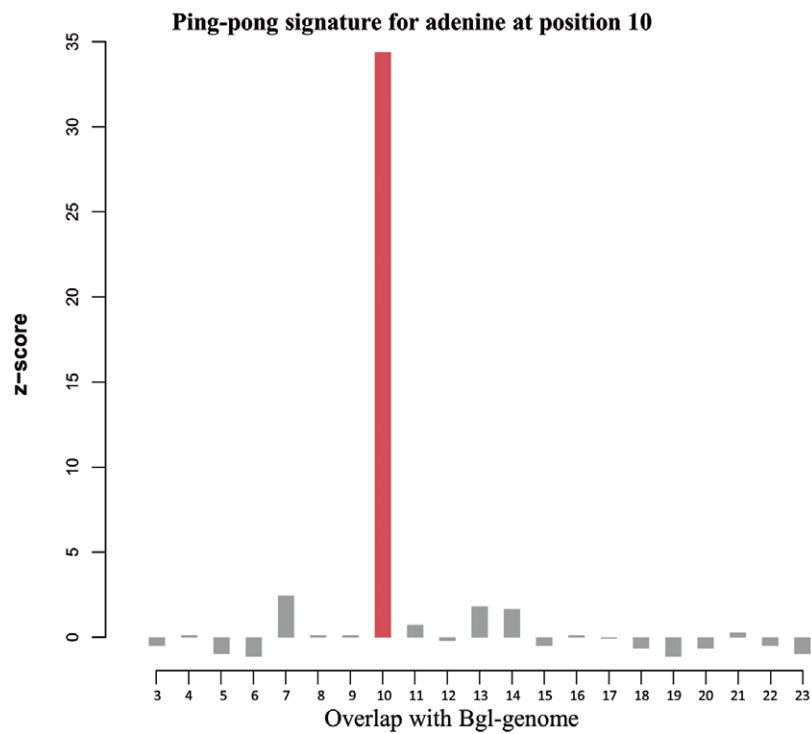


Fig. 4: ping-pong signature for putative Bgl-piRNAs with genome of *Biomphalaria glabrata*. Strong signature of ping-pong cycle with high score for overlapping of Bgl-piRNAs on *B. glabrata* genome with adenine at tenth position.