SUPPLEMENTARY MATERIALS

Supplementary Table 1. 7+18-M miRNAs related to cancer pathway

miRNA	Fold change	oc/ts	Related cancers	Reference
miR-103	3.997	oc/ts	OC: gastric cancer, *in vitro*, *in vivo* TS: lung tumor, *in vitro*, *in vivo*	[1,2]
miR-128a	2.31	ts	triple-negative breast cancer, *in vivo, in vitro*	[3]
miR-136	1.737	ts	triple-negative breast cancer, *in vivo, in vitro*	[4]
miR-139-5p	2.865	ts	colorectal cancer, in vitro, *in vivo*	[5]
miR-140	2.409	ts	non-small cell lung cancer, *in vitro, in vivo*	[6]
miR-142-3p	6.718	ts	cervical cancer cells, *in vitro*	[7]
miR-153	3.332	ts	colon cancer cells, *in vitro, in vivo*	[8]
miR-181a	1.358	oc/ts	breast cancer	[9] (Review)
miR-190	2.724	ts	breast cancer metastasis, *in vitro, in vivo*	[10]
miR-204	1.458	ts	bladder cancer, in vitro / breast cancer *in vivo, in vitro*	[11,12]
miR-207	0.699	N/A	miR-207 enhances ionizing radiation-induced apoptosis by directly targeting Akt3	[13]
miR-218	5.787	ts	gastric cancer, *in vitro, in vivo*	[14]
miR-219	1.938	ts	non-small cell lung cancer, *in vitro*	[15]
miR-29b	2.715	oc/ts	prostate, breast, lung, colon, ovarian, etc.	[16] (Review)
miR-29c	3.463	ts	pancreatic cancer, *in vitro*	[17]
miR-300	1.929	oc	breast cancer, *in vitro, in vivo*	[18]
miR-30e*	3.431	oc	prostate cancer, *in vitro, in vivo*	[19]
miR-34b-5p	1.65	ts	thyroid carcinoma, *in vitro*	[20]
miR-369-3p	3.346	oc	papillary thyroid cancer, *in vitro*	[21]
miR-377	1.79	ts	esophageal cancer, *in vitro, in vivo*	[22]
miR-381	2.722	ts	breast cancer, *in vitro*	[23]
miR-709	1.834	ts	T cell acute lymphoblastic leukemia, *in vivo*	[24]
miR-9	2.592	oc	non-small cell lung cancer, *in vitro*	[25]

Fold change, dKO / WT ratio in 18 months aged mice; oc, oncogenic SmiRNA; ts, tumor suppressor miRNA; N/A, unable to define its distinct role; some information were drawn from review articles.
miR-#* can be interpreted as miR-#-3p.

Supplementary Table 2. 18-M miRNAs related to Cancer pathway

miRNA	Fold change	oc/ts	Related Cancers	Reference
let-7a*	1.746	N/A	let7a-3p activated by Ago3, might negatively regulate RAB10 (a member of Ras oncogene family)	[26]
let-7b	2.719	ts	malignant melanoma (cutaneous melanoma), *in vitro*	[27]
miR-106a	2.596	oc/ts	OC: endometrial adenocarcinoma, *in vitro, in vivo* TS: colorectal cancer, *in vitro, in vivo*	[28,29]
miR-106b	2.175	oc	breast cancer, *in vitro, in vivo*	[30]
miR-129-5p	2.153	ts	gastric cancer, *in vitro, in vivo*	[31]
miR-130a	2.444	oc/ts	OC: gastric cancer, osteosarcoma TS: breast cancer	[32] (Review)
miR-132	1.588	ts	lung cancer, *in vitro, in vivo*	[33]
miR-148b	2.569	ts	hepatocellular carcinoma, *in vitro, in vivo*	[34]
miR-152	2.748	ts	colorectal cancer, *in vitro, in vivo*	[35]
miR-15a	5.259	ts	non-small cell lung cancer, *in vitro*	[36]
miR-16	3.263	ts	colorectal cancer, *in vitro*	[37]
miR-185	2.278	ts	non-small cell lung cancer, *in vitro, in vivo*	[38]
miR-193	4.311	ts	acute myeloid leukemia, *in vitro*	[39]
miR-195	4.403	ts	non-small cell lung cancer, *in vitro, in vivo*	[40]
miR-19a	4.235	oc	colorectal cancer, *in vitro, in vivo*	[41]
miR-20a	2.941	ts	breast cancer, *in vitro, in vivo*	[42]
miR-22*	2.231	ts	hepatocellular carcinoma, *in vitro*	[43]
miR-222	3.202	oc/ts	OC: thyroid papillary, breast, hepatocellular carcinoma, lung cancer TS: oral tongue squamous cell carcinoma, erythroleukemic cell	[44] (Review)
miR-24	1.694	oc/ts	OC: breast cancer, *in vitro, in vivo* TS: gastric cancer, *in vitro, in vivo*	[45,46]
miR-26a	1.871	ts	hepatocellular carcinoma, *in vitro, in vivo*	[47]
miR-27b	3.646	oc/ts	OC: glioma, cervical cancer, breast cancer TS: lung adenocarcinoma, prostate cancer, colorectal cancer, acute myeloid leukemia, gastric cancer, bladder cancer	[48] (Review)
miR-29a	1.681	oc/ts	OC: breast cancer, *in vitro* TS: gastric cancer, *in vitro*	[49,50]
miR-301a	3.121	oc	prostate cancer, *in vitro, in vivo*	[51]
miR-30a	3.935	ts	lung cancer, *in vitro, in vivo*	[52]
miR-30b	2.031	ts	gastric cancer, *in vitro, in vivo*	[53]
miR-30e	2.193	ts	breast cancer, *in vitro, in vivo*	[54]
miR-329	1.947	ts	neuroblastoma, *in vitro*	[55]
miR-335-5p	2.701	ts	gastric cancer, *in vitro*	[56]
miR-338-3p	4.351	ts	gastric cancer, *in vitro, in vivo*	[57]
miR-338-5p	1.862	ts	hepatocellular carcinoma, *in vitro*	[58]
miR-340-5p	1.344	ts	colorectal cancer, *in vitro*	[59]
miR-350	2.831	N/A	mir-350 can inhibit JNK and p38 pathways and result in hypertrophy of cardiomyocytes	[60]
miR-365	2.969	oc/ts	OC: breast cancer, *in vitro*, cutaneous squamous cell carcinoma, *in vitro, in vivo* TS: colon cancer, *in vitro, in vivo*	[61-63]
miR-374	1.716	ts	squamous cell carcinoma, *in vitro*	[64]
miR-487b	3.492	oc	lung cancer, *in vitro, in vivo*	[65]
miR-676	1.613	N/A	indirectly regulated by the level of p53	[66]
miR-7a	3.464	oc/ts	OC: renal, oral TS: breast, lung, colorectal, cervical, etc.	[67] (Review)
miR-7b	4.552	oc/ts	OC: renal, oral TS: breast, lung, colorectal, cervical, etc.	[67] (Review)
miR-9*	1.987	ts	gastric cancer, *in vitro*	[68]

Fold change, dKO/WT ratio in 18 months aged mice. oc, oncogenic miRNA; ts, tumor suppressor miRNA; N/A, unable to define its distinct role; some information were drawn from review articles.
miR-#* can be interpreted as miR-#-3p.

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