

**Supplementary Table 4: Results of the master regulator analysis (MRA) for each miR regulon.**

The table lists, for each miR, the subgroup in which it is differentially expressed, its direction of change and the direction of change of the differentially expressed genes in MRA and the MRA p-value (Fisher's exact test). *Abbreviations and terms* : 7D, Day 7 post ICU discharge; Improver, patient phenotype at month 6 post-ICU with increase normalizing quadriceps cross sectional area, and  $\geq 10$  cm<sup>2</sup>; up, upregulated; down, downregulated.

miR	Subgroup	miR regulation	Gene regulation	p-value
hsa-mir-1321	7D	up	down	4.11E-79
hsa-mir-424-5p	7D	down	up	2.44E-74
hsa-mir-424-3p	7D	down	up	1.60E-69
hsa-mir-3622a-3p	7D	up	down	3.47E-61
hsa-mir-424-5p	7D	down	down	4.63E-50
hsa-mir-3175	7D	down	down	2.30E-49
hsa-mir-29a-3p	7D	down	down	3.16E-42
hsa-mir-29b-3p	7D	down	down	8.71E-40
hsa-mir-502-3p	7D	down	up	3.07E-37
hsa-mir-3175	7D	down	up	4.42E-37
hsa-mir-206	7D	down	up	1.22E-36
hsa-mir-4780	7D	down	up	9.94E-35
hsa-mir-23a-3p	7D	down	up	1.00E-34
hsa-mir-638	7D	down	down	5.71E-33
hsa-mir-4795-5p	7D	up	up	1.34E-31
hsa-mir-574-3p	7D	up	up	5.42E-31
hsa-mir-29b-3p	7D	down	up	2.46E-27
hsa-mir-4516	7D	down	up	1.68E-24
hsa-mir-29a-3p	7D	down	up	7.57E-23
hsa-mir-4764-3p	7D	up	down	3.40E-21
hsa-mir-502-3p	7D	down	down	5.02E-21
hsa-mir-551a	7D	up	down	6.81E-20
hsa-mir-3136-3p	7D	up	up	1.18E-19
hsa-mir-638	7D	down	up	2.13E-16
hsa-mir-600	7D	up	up	1.33E-14
hsa-mir-4488	7D	down	up	1.75E-14
hsa-mir-5704	7D	up	up	9.02E-14
hsa-mir-490-3p	Improver	up	up	3.87E-13
hsa-mir-663a	7D	down	down	2.38E-12
hsa-mir-4732-3p	Improver	up	up	8.61E-10
hsa-mir-4290	Improver	up	up	3.35E-09
hsa-mir-642b-5p	Improver	up	down	5.79E-09
hsa-mir-4762-5p	Improver	up	down	4.85E-08
hsa-mir-490-3p	Improver	up	down	1.04E-07
hsa-mir-3133	7D	up	up	2.17E-07
hsa-mir-4279	Improver	up	down	2.65E-06
hsa-mir-660-3p	Improver	up	down	6.02E-06
hsa-mir-4421	Improver	up	down	2.64E-05
hsa-mir-3124-3p	Improver	up	down	3.78E-05
hsa-mir-665	Improver	up	down	4.97E-05
hsa-mir-4473	Improver	up	up	7.64E-05
hsa-mir-4698	Improver	up	down	8.55E-05
hsa-mir-4530	Improver	up	down	0.000137491
hsa-mir-4732-3p	Improver	up	down	0.000175593
hsa-mir-4762-5p	Improver	up	up	0.000184849
hsa-mir-4747-5p	Improver	up	down	0.000315945
hsa-mir-485-3p	Improver	up	up	0.000360794
hsa-mir-548as-3p	7D	up	up	0.00037128
hsa-mir-3611	Improver	up	up	0.000628242
hsa-mir-196b-5p	Improver	down	down	0.000757459
hsa-mir-4698	Improver	up	up	0.001747298
hsa-mir-4707-5p	7D	down	up	0.002402213

hsa-mir-4739	Improver	up	down	0.002970471
hsa-mir-205-3p	Improver	up	down	0.004102455
hsa-mir-483-3p	Improver	up	down	0.011089712
hsa-mir-597	Improver	down	down	0.018263816
hsa-mir-4712-3p	Improver	up	down	0.019417231
hsa-mir-4701-5p	Improver	down	down	0.019698563
hsa-mir-589-5p	Improver	down	down	0.021295127
hsa-mir-744-5p	Improver	up	down	0.03074114
hsa-mir-4667-5p	Improver	up	down	0.038197496
hsa-mir-4682	Improver	up	down	0.045016619