



Corrigendum: An Overview of MicroRNAs as Biomarkers of ALS

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A Corrigendum on

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In the original article, there was a mistake in **Table 1** as published. Some of the miRNAs listed in the table were incorrectly placed in the wrong column and/or row. The corrected **Table 1** appears below.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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TABLE 1 | Circulating miRNA-based biomarkers found to be differentially expressed in biofluids.

	Authors	ALS type	n	Validated changes		Controls	RNA extraction	Profiling technique	RT-qPCR validation	RT-qPCR Normalization
				Increase	Decrease					
Serum	Freischmidt et al. (4)	Sporadic	22	–	MIR132-5p MIR132-3p MIR143-5p MIR143-3p LET7B-5p	Age-matched healthy controls	miRNeasy Mini	–	Ncode VILO EXPRESS SYBR GreenER	Spiked in cel-MIR39-3p
	De Felice et al. (5)	Sporadic	72	MIR338-3p	–	Age-matched healthy controls	Trizol	–	miScript RT-qPCR	LET7A
	Freischmidt et al. (6)	Familial	22	–	MIR1825 MIR1915-3p MIR3665 MIR4530 MIR4745-5p	Age-matched healthy controls	QIAzol and miRNeasy Mini	Affymetrix GeneChip 3.0 Array	miScript RT-qPCR	Spiked in cel-MIR39-3p
		Sporadic	14	–	MIR3665 MIR4530 MIR4745-5p					
	Toivonen et al. (7)	–	12	MIR106B <u>MIR206</u>	–	Age-matched healthy controls	Norgen Total RNA	Affymetrix GeneChip 2.0 Array	TaqMan miRNA RT-qPCR	Spiked in cel-MIR39-3p
	Freischmidt et al. (8)	Sporadic	18	–	MIR1234-3p <u>MIR1825</u>	Age-matched healthy controls/ Alzheimer's/ Huntington's	QIAzol and miRNeasy Mini	Affymetrix GeneChip 3.0 Array	miScript RT-qPCR	Spiked in cel-MIR39-3p
	Waller et al. (13)	Sporadic	50	MIR143-3p <u>MIR206</u>	MIR374B-5p	Age-matched healthy controls/ disease mimics	Norgen Circulating Nucleic Acid Isolation	TaqMan Low Density RT-qPCR arrays	miScript RT-qPCR	MIR17-5p MIR24 MIR223-3p
	Matamala et al. (16)	Sporadic	20	MIR142-3p	MIR1249-3p	Age-matched healthy controls	Trizol LS and miRNeasy Serum/ Plasma	Illumina TruSeq Small RNA on Illumina MiSeq	TaqMan miRNA RT-qPCR	Spiked in cel-MIR39-3p

(Continued)

TABLE 1 | Continued

	Authors	ALS type	n	Validated changes		Controls	RNA extraction	Profiling technique	RT-qPCR validation	RT-qPCR Normalization
				Increase	Decrease					
	Raheja et al. (17)	Sporadic/ Familial	23	Screen only	Screen only	Healthy controls	miRcury	miRNA LNA RT-qPCR arrays	–	–
	Xu et al. (18)	–	10	–	MIR27A-3p	Healthy controls	Trizol or miRNeasy Micro	–	miDETECT A Track miRNA RT-qPCR or TaqMan miRNA RT-qPCR	MIR16-5p
Plasma	Takahashi et al. (9)	Sporadic	48	MIR4649-5p	MIR4299	Age-matched healthy controls	miRNeasy Serum/Plasma	3D-Gene Human miRNA oligo chip	miScript RT-qPCR	MIR4516
	de Andrade et al. (11)	Sporadic	39	MIR424 MIR206	–	Aged match healthy control	miRvana PARIS	Affymetrix GeneChip array (on muscle)	TaqMan miRNA RT-qPCR	MIR16-5p
	Sheinerman et al. (12)	–	50	MIR206/MIR338-3p MIR9/MIR129-3p MIR335-5p/MIR338-3p	–	Age-matched healthy controls	Trizol and Ambion Glass fiber Columns	Literature search	TaqMan miRNA RT-qPCR	–
Cerebrospinal Fluid	Freischmidt et al. (4)	Sporadic	22	MIR143-5p MIR574-5p	MIR132-5p MIR132-3p MIR143-3p	Age-matched healthy controls	miRNeasy Mini	–	Ncode VILO EXPRESS SYBR GreenER	Spiked in cel-MIR39-3p
	De Felice et al. (5)	Sporadic	72	MIR338-3p	–	Age-matched healthy controls	Trizol	–	miScript RT-qPCR	MIR24
	Benigni et al. (10)	Sporadic	24	MIR181A-5p	LET7A-5p LET7B-5p LET7F-5p MIR15b-5p MIR21-5p MIR195-5p MIR148A-3p	Age-matched healthy controls	miRNeasy Mini	Human miFinder 384HC miRNA PCR array	SYBR Green RT-qPCR	Spiked in cel-MIR39-3p MIR608 MIR328-3p
	Waller et al. (14)	Sporadic	32	Screen only	Screen only	Age-matched healthy controls/disease mimics	miRvana PARIS	Illumina TruSeq Small RNA on Illumina HiScanSq	miScript II RT-qPCR	Spiked in cel-MIR39-3p MIR30A-5p

(Continued)

TABLE 1 | Continued

	Authors	ALS type	n	Validated changes		Controls	RNA extraction	Profiling technique	RT-qPCR validation	RT-qPCR Normalization
				Increase	Decrease					
Whole Blood	Liguori et al. (15)	Sporadic	56	-	<u>LET7A-5p</u> <u>LET7D-5p</u> <u>LET7F-5p</u> <u>LET7G-5p</u> <u>LET7I-5p</u> <u>MIR15A-5p</u> <u>MIR15B-5p</u> <u>MIR151A-5p</u> <u>MIR151B</u> <u>MIR16-5p</u> <u>MIR22-3p</u> <u>MIR23A-3p</u> <u>MIR26A-5p</u> <u>MIR26B-5p</u> <u>MIR27B-3p</u> <u>MIR28-3p</u> <u>MIR30B-5p</u> <u>MIR30C-5p</u> <u>MIR93-5p</u> <u>MIR103A-3p</u> MIR106B-3p <u>MIR128-3p</u> <u>MIR130A-3p</u> <u>MIR130B-3p</u> <u>MIR144-5p</u> <u>MIR148A-3p</u> <u>MIR148B-3p</u> <u>MIR182-5p</u> <u>MIR183-5p</u> <u>MIR186-5p</u> <u>MIR221-3p</u> <u>MIR223-3p</u> <u>MIR342-3p</u> <u>MIR425-5p</u> <u>MIR451A</u> <u>MIR532-5p</u> <u>MIR550A-3p</u> <u>MIR584-5p</u>	Age-matched healthy controls	PAXgene Blood RNA	Illumina TruSeq Small RNA on Illumina HiSeq2500	TaqMan Advanced miRNA RT-qPCR	MIR484

Those miRNA underlined show consistent directional changes between control and ALS cases while those in bold show contrasting directional changes between control and ALS cases.