Corrigendum: an overview of MicroRNAs as biomarkers of ALS

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Corrigendum: An Overview of MicroRNAs as Biomarkers of ALS

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A Corrigendum on

An Overview of MicroRNAs as Biomarkers of ALS
by Joilin, G., Leigh, P. N., Newbury, S. F., and Hafezparast, M. (2019). Front. Neurol. 10:186. doi: 10.3389/fneur.2019.00186

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.

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** MIR206	–	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 MIR1825	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** MIR206	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	-	LET7A-5p LET7D-5p LET7F-5p LET7G-5p LET7I-5p MIR15A-5p MIR15B-5p MIR151A-5p MIR151B MIR16-5p MIR22-3p MIR23A-3p MIR26A-5p MIR26B-5p MIR27B-3p MIR28-3p MIR30B-5p MIR30C-5p MIR93-5p MIR103A-3p **MIR106B-3p** MIR128-3p MIR130A-3p MIR130B-3p MIR144-5p MIR148A-3p MIR148B-3p MIR182-5p MIR183-5p MIR186-5p MIR221-3p MIR223-3p MIR342-3p MIR425-5p MIR451A MIR532-5p MIR550A-3p MIR584-5p	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.