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Small non-coding RNAs as new biomarkers to evaluate the quality of the embryo in the IVF process

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Table 1. Selected miRNAs from the SBM and their respective target genes.

process	miRNA with successfully implanted blastocysts	target genes	miRNA with non-successfully implanted blastocysts	target genes
proliferation	miR-20a [9]	PTEN, ATG7, TIMP2	miR-373-3p [33]	----
	miR-30c [9]	APC, KRAS, PIK3CD	miR-518a-3p [33]	NIK
	miR-19b-3p [33]	PTEN	miR-191 [34]	EGR1
	miR-372-3p [33]	----		
	miR-634 [37]	mTOR		
	let-7b-5p [32, 38]	TGFBR1, NRAS		
angiogenesis	miR-29c-3p [37]	COL4	miR-373-3p [33]	VEGF-A
	miR-20a [39]	VEGF-A, HIF-1α		
	miR-634 [37]	JAG		
viability	miR-20a [40]	BCL2	miR-182-5p [33]	CASP9
	miR-92a-3p [38]	-----		
	let-7b-5p [38]	NRAS		
cell cycle	miR-20a [9]	CDKN1A/p21, CCND1	miR-142-3p [36]	CCND1
			miR-372 [34]	CDK2, CDK6, MAPK3, CYCLIN A1
			miR-302a-3p [33]	HMGA2, CCND1, OCT4, SOX2
			miR-191 [34]	CDK6, MAPK3
apoptosis	miR-634 [37]	mTOR	miR-372 [34]	MAP3K1, CDK6
	let-7b-5p [32]	TNFRSF10B	miR-518a-3p [33]	NIK
			miR-302a-3p [33]	HMGA2
			miR-191 [34]	MAP3K, CDK6
implantation	let-7b-5p [32]	IGF1R, MUC1	miR-661 [35]	MDM2
	let-7i-5p [32]	AKT2	miR-519d-3p [33]	MMP2
			miR-302a-3p [33]	SOCS5, HMGA2
blastocyst's development	let-7b-5p [32]	AKT2, FOXO1, IGF2BP2		
	let-7i-5p [32]	TEAD1, BUB1B, FOXO1		