

Variation in MiR-34a is associated with diabetes

Supplementary Table 1. Sequences of RT-qPCR primers and SNPs primers

Gene	Primer	Sequence (5'-3')
hsa-miR-34a	RT	CTCAACTGGTGTCGTGGAGTCGGCAATTCAGTTGAGACAACCAG
	Forward	ACACTCCAGCTGGGTGGCAGTGTCTTAGC
	Reverse	CTCAACTGGTGTCGTGGA
RNU48	Forward	CTTTATTGAGGTTTGGCTCCAAGCACTG
	Reverse	CACCCAGACTAGGATCAACTCCACAGGA
rs12128240	Forward	AAGCCCACACAGGCACTTTCTAT
	Reverse	GCTTTTGGCTGGGAGAAGTTTG
rs6577555	Forward	TGTGATTGCGCCAGTCTG
	Reverse	GCTACTTCATTGCTCCCTTT
rs2666433	Forward	ATTGCCATCACAGGGTT
	Reverse	GCACTACCTTACCTGGAATC

Supplementary Table 2. Relevant information of three SNPs in hsa-miR-34a

SNP (gene)	Chromosome location	Distance relative to 5' pre-miR-34a	MAF IN CHB	Transcription factor before mutation	Transcription factor after mutation
Rs12128240 C>T	Chr1:9151244	+532	0.128	NO	AR, RREB1, RUNX2, RFX5
Rs6577555 A>C	Chr1:9152228	-450	0.376	ZNF263, RFX2, SRY	NO
Rs2666433 A>G	Chr1:9153118	-1340	0.267	RUNX2, BRCA1	THAP1, YY1

Variation in MiR-34a is associated with diabetes

Supplementary Table 3. Characteristics of human miRNA expression profiling studies (T2DM vs. non-diabetic controls)

Author	Year	Sample			Differently expressed miRNAs
		Country	Tissue	Type: NO.	
Xiao Wang (Wang X, et al. 2014)	2014	Sweden, Iraq	Plasma	T2DM/Normal+IFG/IGT: 33/119	Up: miR-15a, miR-21, miR-24, miR-29b, miR-126, miR-144, miR-150, miR-320a, miR-486-5p
Gaia Spinetti (Spinetti G, et al. 2013)	2013	NR	Serum and PACs from PBMCs	T2DM+CLI/nondiabetic: 99 (101)/18 T2DM/nondiabetic: 6/5 T2DM+CLI/CLI: 6/6 T2DM/nondiabetic: 52/17	Up: miR-15a, miR-15b, miR-16, miR-17, miR-18a, miR-19a, miR-19b, miR-20a, miR-23a, miR-24, miR-27b, miR-103, miR-107, miR-126, miR-132, miR-195, miR-221 Down: miR-222, miR-497
Anna Zampetaki (Zampetaki A, et al. 2012)	2010	Bolzano, Italy	Plasma	T2DM/nondiabetic: 80/80	Up: miR-28-3p Down: miR-24, miR-21, miR-20b, miR-15a, miR-126, miR-191, miR-197, miR-223, miR-320, miR-486, miR-150
Zhang (Zhang T, et al. 2013)	2013	Shenzhen, China	Plasma	T2DM/nondiabetic: 30/30	Down: miR-126
Balasubramanyam (Balasubramanyam M, et al. 2011)	2011	Chennai, India	PBMCs	T2DM/nondiabetic: 20/20	Down: miR-146
Corral-Fernández (Corral-Fernández NE, et al. 2013)	2013	Mexico	PBMCs	T2DM/nondiabetic: 20/20	Down: miR-155, miR-146a
Karolina (Karolina DS, et al. 2011)	2011	Singapore	Whole blood	T2DM/nondiabetic: 8/7	Up: miR-106b, miR-125a-5p, miR-125b, miR-126, miR-1285, miR-1301, miR-130a, miR-130b, miR-142-3p, miR-144, miR-150, miR-151-3p, miR-151-5p, miR-15a, miR-17, miR-183, miR-185, miR-190, miR-192, miR-193a-3p, miR-194, miR-221, miR-222, miR-23a, miR-23b, miR-26a, miR-26b, miR-27a, miR-299-3p, miR-29a, miR-29b, miR-29c, miR-320a, miR-320b, miR-320c, miR-320d, miR-335, miR-361-3p, miR-375, miR-502-3p, miR-550, miR-589, miR-620, miR-629, miR-665, miR-886-5p, miR-99b Down: let-7b, let-7d, let-7e, let-7g, let-7i, miR-106a, miR-1184, miR-129-5p, miR-1297, miR-146a, miR-146b-5p, miR-17, miR-182, miR-185, miR-186, miR-19a, miR-20a, miR-20b, miR-30c, miR-30d, miR-30e, miR-340, miR-342-3p, miR-34b, miR-362-5p, miR-374b, miR-519e, miR-532-3p, miR-636, miR-637, miR-652, miR-660, miR-7, miR-923
Karolina (Karolina DS, et al. 2012)	2012	Singapore	Whole blood	T2DM/nondiabetic: 50/46	Up: miR-130a, miR-150, miR-192, miR-27a, miR-320a Down: miR-17, miR-197, miR-509-5p, miR-652, miR-195, miR-92a
Kong (Kong L, et al. 2010)	2010	Shandong, China	Serum	T2DM/nondiabetic: 18/26	Up: miR-34a
Kong (Kong L, et al. 2011)	2011	Shandong, China	Serum	T2DM/nondiabetic: 18/19	Up: miR-9, miR-29a, miR-30d, miR-34a, miR-124a, miR-146a, miR-375
Meng (Meng S et al. 2012)	2012	Shanghai, China	PBMCs	T2DM/nondiabetic: 15/15	Down: miR-21, miR-27a, miR-27b, miR-126, miR-130
Ortega (Ortega FJ, et al. 2014)	2014	Girona, Spain	Plasma	T2DM/nondiabetic: 30/35 T2DM+obese/obese: 18/10	Up: miR-140-5p, miR-142-3p, miR-222 Down: miR-125b, miR-130b, miR-126a
Pescador (Pescador N, et al. 2013)	2013	Madrid, Spain	Serum	T2DM: 13 Nondiabetic: 20 Obese: 20 T2DM+obese: 16	Up: miR-15b Down: miR-138, miR-376a, miR-503
Rong (Rong Y, et al. 2013)	2013	Hubei, China	Plasma	T2DM/nondiabetic: 90/90	Up: miR-146
Xavier DJ (Xavier DJ, et al. 2015)	2015	Brazil	PBMCs	T2DM/nondiabetic: 9/9	Up: miR-101, miR-10a, miR-1260, miR-142-5p, miR-146b-5p, miR-186, miR-222, miR-29b, miR-302b, miR-30e, miR-32, miR-339-3p, miR-424 Down: miR-107, miR-148b, miR-151-5p, miR-224, miR-23b
Santovito D (Santovito D, et al. 2014)	2014	NR	Plasma and Serum	T2DM/nondiabetic: 18/12	Up: miR-326, miR-532, miR-186, miR-127-3p Down: let-7g, let-7d, miR-126, miR-101, miR-18b, miR-199a-3p, miR-21, miR-502-3p, miR-495, miR-132, miR-15b, miR-200c, miR-223-5p, miR-16, miR-543, miR-195, let-7a, miR-26b, miR-374a, miR-26a, let-7f