Table SIA. miRNAs differentially regulated in colon carcinoma tissues

Molecules	Regulation	Biomarker function
miR-21[†]/miR-590-5p*	up	pancreatic adenocarcinoma, primary central nervous system lymphoma, systemic lupus erythematosus
miR-20a[†]/miR-106b[†]/ miR-17-5p*	up	ALK-positive anaplastic large cell lymphoma, T-cell non-Hodgkin's disease, hepatocellular carcinoma, liver cancer, lung cancer, lung squamous cell carcinoma, nonobstructive azoospermia, schizophrenia
miR-182*	up	sepsis, endometrial ovarian cancer, endometrioid carcinoma, lung cancer, lung squamous cell carcinoma, metastasis, nonobstructive azoospermia
miR-183*	up	Type 2 diabetes, colorectal cancer, gastric cancer
miR-130a/miR-130b/ miR-301a*	up	cancer, cervical carcinoma, endometrial ovarian cancer, endometrioid carcinoma, lupus nephritis, pancreatic cancer, pancreatic ductal adenocarcinoma, papillary thyroid cancer, papillary thyroid carcinoma, uterine cancer
miR-224*[†]	up	endometrial cancer, idiopathic pulmonary fibrosis, lung cancer, lung squamous cell carcinoma, pancreatic cancer, pancreatic ductal adenocarcinoma, papillary thyroid cancer, papillary thyroid carcinoma
miR-96/miR-1271*	up	nonsyndromic autosomal dominant 50 deafness, melanoma metastases, metastasis, multiple sclerosis, pancreatic cancer, pancreatic ductal adenocarcinoma
miR-18a[†]/miR-18b[†]/ miR-4735-3p*	up	multiple sclerosis
miR-19b[#]/miR-19a*	up	Alzheimer's disease, relapsing-remitting multiple sclerosis
miR-29b/miR-29c[Ω]/ miR-29a*[Ω]	up	cancer, chronic B-cell leukemia, endometrial cancer, amyotrophic lateral sclerosis, cervical carcinoma, melanoma, uterine cancer
miR-378d/miR-378/ miR-422a*	down	Alzheimer's disease
miR-30c/miR-30a/ miR-30d*	down	Alzheimer's disease, colorectal cancer, lung cancer, prostate cancer
miR-29[Ω]/miR-497/ miR-195*[Ω]	down	chronic B-cell leukemia
miR-145*[Ω]	down	esophageal squamous cell cancer, esophageal squamous cell carcinoma, Alzheimer's disease, endometriosis, metastasis, prostate cancer, bipolar disorder, cancer, cervical carcinoma, clear-cell adenocarcinoma, hepatocellular carcinoma, liver

		cancer, multiple sclerosis, neoplasia, non-small cell lung cancer, non-small-cell lung carcinoma, nonobstructive azoospermia, pancreatic cancer, pancreatic ductal adenocarcinoma, relapsing-remitting multiple sclerosis, renal cancer, tumor, tumorigenesis, uterine cancer
miR-34b*$^{\Omega}$	down	gastric cancer
miR-26a$^{\Omega}$/miR-26b*	down	cancer, cervical carcinoma, idiopathic pulmonary fibrosis, uterine cancer, head and neck cancer, hypopharyngeal squamous cell carcinoma, nasopharyngeal carcinoma
miR-328/ miR-328b-3p/miR-328a*	down	schizophrenia, head and neck cancer, hypopharyngeal squamous cell carcinoma
miR-139-5p*	down	bladder cancer, esophageal squamous cell cancer, esophageal squamous cell carcinoma, head and neck cancer, hypopharyngeal squamous cell carcinoma
miR-218/miR-218a*	down	NA
miR-498	down	psoriasis

Table SIB. miRNAs differentially regulated in colon adenoma tissues

Molecules	**Regulation**	**Biomarker function**
miR-182*	up	sepsis, endometrial ovarian cancer, endometrioid carcinoma, lung cancer, lung squamous cell carcinoma, metastasis, nonobstructive azoospermia
miR-183*	up	Type 2 diabetes, colorectal cancer, gastric cancer
miR-224*†	up	endometrial cancer, idiopathic pulmonary fibrosis, lung cancer, lung squamous cell carcinoma, pancreatic cancer, pancreatic ductal adenocarcinoma, papillary thyroid cancer, papillary thyroid carcinoma
miR-503*	up	endometrial cancer, parathyroid cancer, parathyroid carcinoma, adrenal cortex carcinoma, cancer
miR-188-5p/miR-188	up	NA
miR-18a*†	up	nonobstructive azoospermia
miR-190/miR-190b*	up	NA
miR-196a†/miR-196b*	up	endometriosis, head and neck cancer, hypopharyngeal squamous cell carcinoma, nonobstructive azoospermia, pancreatic cancer, pancreatic ductal adenocarcinoma
miR-210	up	Alzheimer's disease, clear-cell adenocarcinoma, lung cancer, renal cancer, chronic hepatitis B, pancreatic cancer, endometrial ovarian cancer, endometrioid carcinoma, hepatocellular carcinoma, liver cancer, liver cirrhosis, lung squamous cell carcinoma, lupus nephritis, non-small cell lung cancer, pancreatic adenocarcinoma, pancreatic ductal adenocarcinoma, preeclampsia
miR-33/miR-33a/miR-33b*	up	nonobstructive azoospermia
miR-483-3p/miR-483*	down	
miR-299-5p/miR-299/miR-3563-5p	down	Duchenne muscular dystrophy, Miyoshi myopathy, dermatomyositis, limb girdle muscular dystrophy type 2B, limb girdle muscular dystrophy type 2a, nemaline myopathy, ovarian endometriosis

miR-20a†/miR-106b/miR-17-5p	down	Positive for: ALK-positive anaplastic large cell lymphoma, T-cell non-Hodgkin's disease, hepatocellular carcinoma, liver cancer, lung cancer, lung squamous cell carcinoma, nonobstructive azoospermia, schizophrenia Negative for: ALK-negative anaplastic large cell lymphoma, T-cell non-Hodgkin's disease)
miR-139-5p*	down	bladder cancer, esophageal squamous cell cancer, esophageal squamous cell carcinoma, head and neck cancer, hypopharyngeal squamous cell carcinoma
miR-137*	down	hepatocellular carcinoma, liver cancer
miR-135a/miR-135b*	down	NA
miR-133a/miR-133b*	down	colorectal cancer, lupus nephritis
miR-1/miR-206/miR-1a	down	NA
miR-153*	down	nonobstructive azoospermia
miR-147*	down	hepatocellular carcinoma, liver cancer

* mature miRNA sequence from the opposite arm of the precursor

Table SIIA. Molecular and cellular function associated with miRNAs involved in colon adenoma tissues.

	Name	p-value	# Molecules
1	Cellular Movement	9.12E-10 - 4.46E-02	19
2	Cellular Growth and Proliferation	9.70E-10 - 4.17E-02	33
3	Cellular Development	3.86E-09 - 4.15E-02	23
4	Cell Cycle	6.51E-05 - 4.60E-02	11
5	Cell Death	3.82E-04 - 4.15E-02	17

Table SIIB. Molecular and cellular function associated with miRNAs involved with colon carcinoma tissues.

	Name	p-value	# Molecules	mi-RNAs
1	Cellular Movement	1.63E-04 - 3.93E-02	6	miR-1 (down), miR-133a (down), miR-20a (down), miR-224 (up), miR-483, miR-375 (up)
2	Cellular Growth and Proliferation	2.19E-04 - 4.92E-02	7	miR-1 (down), miR-133a (down), miR-20a (down),miR-375 (up), miR-224 (up), miR-182 (up), miR-483-3p (down),
3	Cell Cycle	5.71E-04 - 1.76E-02	3	miR-20 (down), miR-92a (up), miR-137 9down)
4	Cell Morphology	1.48E-03 - 1.48E-03	1	miR-20a (down)
5	Cell-To-Cell Signaling and Interaction	1.48E-03 - 1.48E-03	1	miR-1 (down)

Table SIIC. Diseases and disorders associated with miRNAs involved with colon adenoma and colon carcinoma.

	Name of the Disease	**p-value**	**# Molecules**
1	Reproductive System Disease	3.90E-17 - 3.74E-02	19
2	Cancer	3.50E-12 - 4.07E-02	23
3	Gastrointestinal Disease	8.96E-12 - 4.26E-02	18
4	Genetic Disorder	8.96E-12 - 3.35E-02	16
5	Renal and Urological Disease	2.43E-10 - 2.04E-03	13
	Name of the Disorder	**p-value**	**# Molecules**
1	Cancer	3.18E-54 - 4.60E-02	68
2	Reproductive System Disease	3.18E-54 - 1.59E-02	54
3	Gastrointestinal Disease	2.47E-38 - 3.69E-02	47
4	Genetic Disorder	2.47E-38 - 4.60E-02	54
5	Hepatic System Disease	9.10E-29 - 7.74E-06	32

Table SIIIA. Genes and miRNAs most overrepresented in networks associated with colon adenoma. 5 networks were identified to be associated with colon carcinoma. Those genes and miRNAs that were represented 2 or more times were shown in the table.

Gene symbol	Gene name	No: of times represented in network
Ins1	insulin I	5
miR-375	--	5
PDK1	pyruvate dehydrogenase kinase, isozyme 1	5
PDPK1	3-phosphoinositide dependent protein kinase-1	5
miR-33/miR-33a/miR-33b	--	4
AHCYL1	adenosylhomocysteinase-like 1	3
miR-96/miR-1271	--	3
BIRC5	baculoviral IAP repeat containing 5	2
CASP2	caspase 2, apoptosis-related cysteine peptidase	2
CCNE1	cyclin E1	2
CDH1	cadherin 1, type 1, E-cadherin (epithelial)	2
CTGF	connective tissue growth factor	2
CTNNB1	catenin (cadherin-associated protein), beta 1, 88kDa	2
FOXO3	forkhead box O3	2
FOXO1	forkhead box O1	2
GADD45G	growth arrest and DNA-damage-inducible, gamma	2
INS	insulin	2
MEF2C	myocyte enhancer factor 2C	2
miR-9	--	2
mir-34	microRNA 34a	2
miR-1/miR-206/miR-1a	--	2
miR-133a/miR-133b	--	2
miR-135a/miR-135b	--	2
MMP9	matrix metallopeptidase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)	2
NRP1	neuropilin 1	2

PSEN1	presenilin 1	2
PTEN	phosphatase and tensin homolog	2
PVRL3	poliovirus receptor-related 3	2
RB1	retinoblastoma 1	2
RPS6KB1	ribosomal protein S6 kinase, 70kDa, polypeptide 1	2
RUNX2	runt-related transcription factor 2	2
SREBF1	sterol regulatory element binding transcription factor 1	2
TAGLN2	transgelin 2	2
TGFB1	transforming growth factor, beta 1	2
TGFBR2	transforming growth factor, beta receptor II (70/80kDa)	2
TNFSF12	tumor necrosis factor (ligand) superfamily, member 12	2
MKI67	antigen identified by monoclonal antibody Ki-67	1
YBX1	Y box binding protein 1	1

Table SIIIB. Genes and miRNAs most overrepresented in networks associated with colon carcinoma. 13 networks were identified to be associated with colon carcinoma. Those genes and miRNAs that were represented 10 or more times were shown in the table.

Gene symbol	**Gene name**	**No: of times represented in network**
BTK	Bruton agammaglobulinemia tyrosine kinase	13
CFLAR	CASP8 and FADD-like apoptosis regulator	13
EFEMP2	EGF containing fibulin-like extracellular matrix protein 2	13
IL18	interleukin 18 (interferon-gamma-inducing factor)	13
miR-346	--	13
ACVR1	activin A receptor, type I	12
miR-197	--	12
TSPAN3	tetraspanin 3	12
ABCA1	ATP-binding cassette, sub-family A (ABC1), member 1	11
miR-33/miR-33a/miR-33b	--	11
miR-135a/miR-135b	--	10
NR3C2	nuclear receptor subfamily 3, group C, member 2	10