

CYTOPLASM

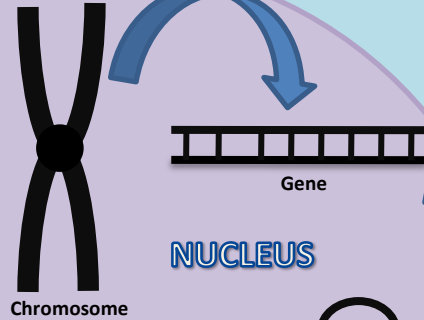
Knockdown of OncomiRs in CRC
e.g. miR-20 , miR-21, miR-31,
miR-95, miR-675

a

Transcription
Inhibition on
OncomiRs - Under
explored Entity

Upregulation of Tumour Suppressor mRNAs
e.g. PTEN, PDCD4, RB, Kras, EGFR, SNX1
Cell cycle arrest, growth inhibition, apoptosis,
reduced invasion and metastatic potential

Exportin induced
transport to cytoplasm



DICER
Processing

DICER

Drosha
Processing

Protein coding Gene

e
Induction of SNPs
in RISC Complex-
Technique still in
its infancy

Active loading
with RISC

d

Sponge constructs
mimicking target
mRNAs

c

mRNA mask constructs
causing competitive
inhibition to miR/RISC

Transcription Regulation
RISC independent Function

Competitive inhibition of
mature miRNA with antisense
oligonucleotides (anti-miR)

b

Antisense Oligonucleotide (anti-miR)

RISC independent
Function

Target mRNA Binding Proteins
(Decoy Activity)

Sponge
Construct
for target
mRNA

mRNA mask
constructs

miR/ RISC

miR/ RISC

miR/ RISC

miR/ RISC

miR/ RISC

miR/ RISC

miR/ RISC

miR/ RISC

miR/ RISC

miR/ RISC

