Cite this as: Zi-ming YUAN, Zhi-li YANG, Qi ZHENG, 2014. Deregulation of microRNA expression in thyroid tumors. *Journal of Zhejiang University-SCIENCE B (Biomedicine & Biotechnology)*, 15(3):212-224. [doi:10.1631/jzus.B1300192]

Deregulation of microRNA expression in thyroid tumors

甲状腺肿瘤中microRNA表达失调的研究进展

Key words: MicroRNA, Target gene, Thyroid tumor, Single nucleotide polymorphism (SNP), Somatic mutation

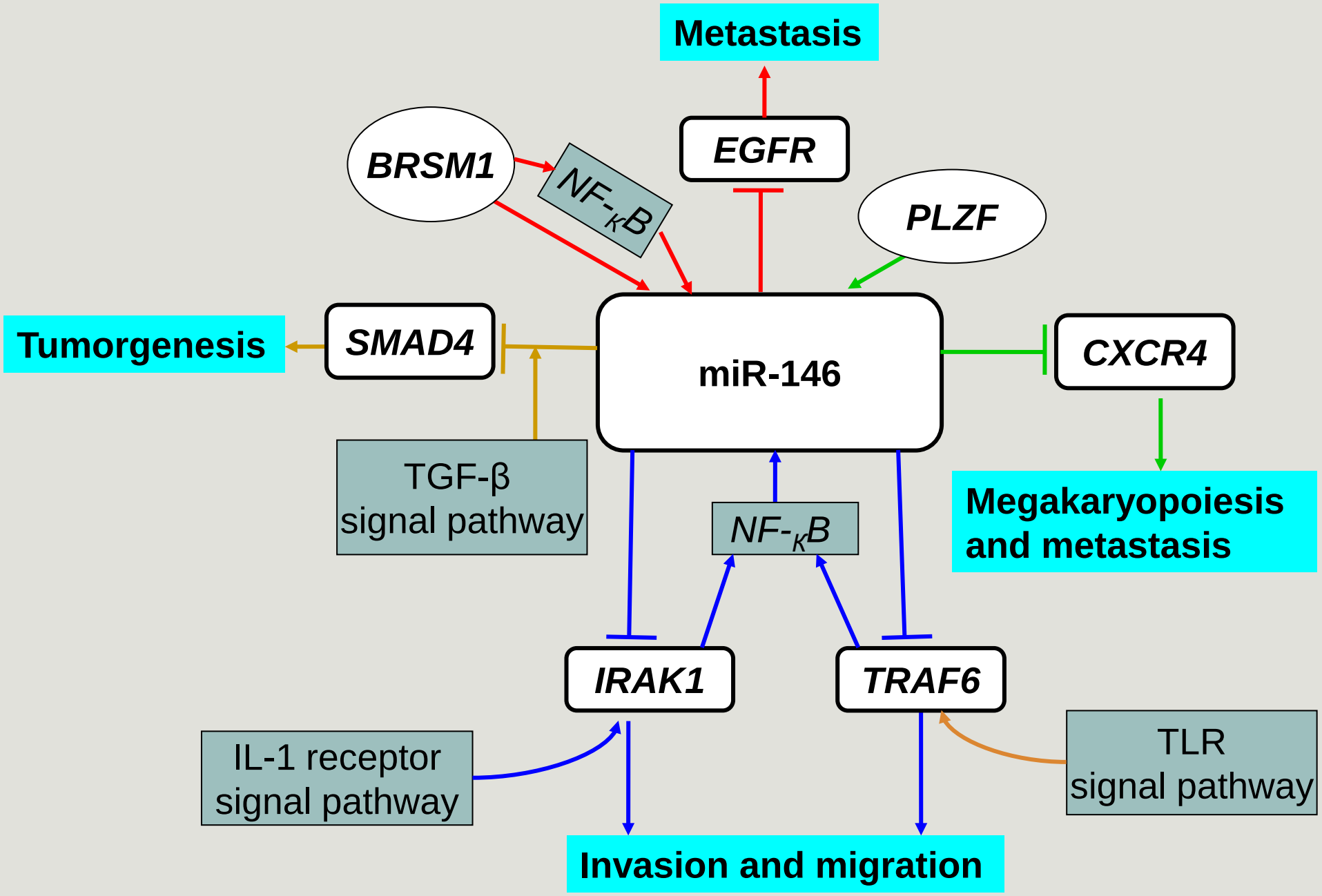
关键词： microRNA (miRNA或miR)；靶基因；甲状腺肿瘤；单核苷酸多态性；体细胞突变

- MicroRNAs (miRNAs or miRs) are endogenous non-coding RNAs that negatively regulate gene expression by binding to the 3' non-coding regions of target mRNAs, resulting in their cleavage or blocking their translation.

- MiRNAs may have an impact on cell differentiation, proliferation, and survival, and their deregulation can be inclined to diseases and cancers, including thyroid tumors.

- The purpose of this review is to summarize the existing findings of deregulated miRNAs in different types of thyroid tumors and to exhibit their potential target genes, especially to demonstrate those involved in tumor invasion and metastasis.

- In addition, new findings of circulating miRNAs expression profiles, single nucleotide polymorphism (SNP) in thyroid tumors, and the correlation of somatic mutations with deregulated miRNAs expression in thyroid tumors were all included in this review.


Metastasis
EGFR
BRSM1
NF-κB
PLZF
Tumorgenesis
SMAD4
miR-146
CXCR4
TGF-β
signal pathway
NF-κB
Megakaryopoiesis
and metastasis
IRAK1
TRAF6
IL-1 receptor
signal pathway
TLR
signal pathway
Invasion and migration