Frixa et al.showed that the miR-128-3p, which is up-regulated in lung cancer tissues, has Drosha and Dicer, two key enzymes of MicroRNAs processing, as the main modulation targets leading to the widespread downregulation of MicroRNA expression. They observed that the MicroRNAs downregulation induced by miR-128-3p contributed to the tumorigenic properties of lung cancer cells. In particular miR-128-3p-mediated MicroRNAs dowregulation contributed to aberrant SNAIL and ZEB1 expression thereby promoting the epithelial-to-mesenchymal transition (EMT) program. Drosha also resulted to be implicated in the control of migratory phenotype as its expression counteracted miR-128-3p functional effects. The study provides mechanistic insights into the function of miR-128-3p as a key regulator of the malignant phenotype of lung cancer cells. This also enforces the remarkable impact of Drosha and Dicer alteration in cancer, and in particular it highlights a role for Drosha in NSCLC cells migration [1].

1)
Frixa T, Sacconi A, Cioce M, Roscilli G, Ferrara FF, Aurisicchio L, Pulito C, Telera S, Carosi MA, Muti P, Strano S, Donzelli S, Blandino G. MicroRNA-128-3p-mediated depletion of Drosha promotes lung cancer cell migration. Carcinogenesis. 2017 Dec 11. doi: 10.1093/carcin/bgx134. [Epub ahead of print] PubMed PMID: 29236960.