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TRANSCRIPTION FACTOR ZEB1 AND POST-TRANSCRIPTIONAL REGULATION OF ITS ACTIVITY IN HUMAN BREAST CARCINOMAE

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The present review describes in detail the modulation of expression and functions of Zeb1, one of the transcription factors regulating the epithelial-mesenchymal transition (EMT-TF), considers numerous and diverse post-transcriptional and post-translational mechanisms of Zeb1 activity regulation and discusses their role in angiogenesis, invasion, metastasis and the tumor stem cell formation. The enzymes responsible for post-translational modifica-

tions of EMF-TFs can act as convenient and effective therapeutic targets, however, this case should be approached with caution, due to the possible dual functions of such enzymes: as oncogenes or tumor suppressors, depending on the cellular context. The review also considers the regulation of EMF-TF at the RNA level, via numerous microRNAs and long non-coding RNAs shown to play a key role in the complex regulatory network of the epithelial-mesenchymal transition.

Keywords: breast carcinoma, epithelial-mesenchymal transition, Zeb1 transcription factor, metastasis, miRNA, lncRNA, regulation of gene expression