

## **Abstract**

The family of transcription factors TEAD regulates the expression of genes that affect cell proliferation, differentiation and apoptosis. Activity of TEAD1 is regulated via the Hippo signaling pathway. General mechanism of tumor cell suppression by the Hippo signaling pathway remains unclear. *C-MYC* and *GLUT1*, the two key regulators of glycolysis, were recently described as targets of the Hippo signaling pathway in human leukemia cells. In this diploma thesis, the interaction of TEAD1 with M-CAT binding motifs was experimentally confirmed in the first exon of *C-MYC* gene. In addition, a new interaction of TEAD1 with M-CAT binding motifs has been found in the enhancer of *C-MYC* promoter and enhancer of *GLUT1* promoter by CHIP analysis. Regulation of glucose metabolism by the Hippo signaling pathway may represent a new mechanism of tumor cell suppression.

**Key words:** Gene regulation, transcription factors, chromatin immunoprecipitation, bioinformatics