

## Recombinant preparation of TEAD transcription factor (abstract)

The TEAD family transcription factors play an important role during development of organisms, where their main purpose is to regulate organ size by activating expression of proteins involved in cell growth and differentiation and apoptosis inhibition. TEAD proteins activity is regulated by signalling pathways and interactions with coactivators. Disregulation of these mechanisms can lead to development of tumors, which is the reason why TEAD proteins became an interesting target for development of new anticancer drugs based on inhibiting their activity. There are several possibilities how to inhibit activity of a transcription factor including blocking its bond to DNA.

To design a new drug that blocks transcription factors binding to DNA the structural basis of interaction of these two molecules has to be known first. In this thesis the DNA binding domain of human protein TEAD1 was prepared using the technique of recombinant expression in bacteria *E. coli*. Suitable conditions of protein production were found and the DNA binding domain of TEAD1 protein was purified so it will be possible to use it for structural analysis of its intraction with DNA.