ABSTRACT

There is currently very few information about the transaltion of linear cytoplasmatic plasmids occured in yeast cells *Kluyveromyces lactis*. However, there is a relatively well developer information about their transcription apparatus. A study of transkript linear plasmids revealed an atypical organization at the 5' end. Those ends contain nontemplate polyadenylation and they are missing the N^7 methylguanosine hat. Because of the presence of this structure, which is localized at 5'end of plasmids specific mRNA, raised a question regarding the iniciation of the translation.

The present thesis is focused on the preparation of reporter systém suitable for studying the influence of a number of the nontemplate adenosins, which were added at the 5' ends of mRNA linear plasmids. The frist step was making a construction of dual yeast cell plasmids carring two reporters genes, which are under the controle of two different promoters. After a successfull construction, the aktivity of promoters TEF1 and PGK1 was measured, whereby the promoter TEF1 proved twice stronger. The transcription start site of both promotor was determined. The second step was the construction of a reporter system directly in yeast cell plasmid pGKL. Reporter genes were under the controle of two promoters originating from the pGKL plasmids. Those plasmids are the iniciators of the creation of transkripty with a different structure. After a measuring of promoters strenght, it was showed that their strenght in comprasion with the promoters TEF1 and PGK1 is very low.

Key words: translation initiation, regulation of gene expression, reporters systém, luciferase, yeast, linear plasmids