# ABSTRACT

Besides recombinant protein expression in prokaryotic cell lines (*E. coli*), systems, that could quickly, reliably and stably produce recombinant proteins in human cell lines, come to the fore. These cell lines assure proper tertiary structure and post-translational modification of the desired products. One of the ways to achieve production of recombinant proteins in human cell lines is the use of lentiviral vectors.

This thesis describes the preparation of the lentiviral vector (plasmid) Daedalus, which contains a construct for recombinant expression of secreted alkaline phosphatase. For the preparation of the desired plasmid methods based on insertion of the secreted alkaline phosphatase gene using the restriction endonucleases and methods based on amplification by polymerase chain reaction (restriction-free cloning, transfer polymerase chain reaction and Gibson assembly) were used.