

## **Abstrakt**

The thesis is aimed on creation and evaluation of the complex educational materials supporting teaching of nucleic acids at the secondary school. First, the current textbooks frequently used for education of biochemistry were reviewed and popularity of individual textbooks was assessed. The major problems of frequently used textbooks are the insufficient graphical accompaniment, lack of recent and interdisciplinary topics and neglected relations to everyday life experience. Therefore the new educational materials are aimed to supplement these problems.

The materials includes: presentation (MS PowerPoint), three educational games, worksheets, laboratory experiment (isolation of DNA) and materials showing new biochemical applications utilised in daily life (DNA sequencing, genetically modified organisms (GMO), Polymerase chain reaction (PCR), DNA cloning). The presented support materials were evaluated at the secondary school conditions. They were successfully tested during the lessons of biochemistry at three different secondary schools. CD with all educational materials is attached.

