

## **ABSTRACT**

Teaching of cell and molecular biology is often restricted by financial and material limitations as well as a lack of expertise. These problems may be overcome by cooperation with scientific institutions and universities. Some scientists teach select courses under the auspices of high school. Others allow students to fulfill internships at their workplaces. The first aim of this thesis is to describe the characteristics of summer school, wherein the participants are integral for providing feedback on what matters most to them. The second goal of the study is to perform four molecular biology lab lessons in the advanced placement genetics course. The results of a qualitative research conducted among summer school participants have shown the benefits present due to contact that occurs between people of the same genuine interest. Student evaluation of molecular biology lessons performed in the advanced placement course revealed that the lab lessons are feasible and positively accepted by students. The thesis also highlights the importance of cooperation between high school and academia.

**Key words:** molecular biology, DNA, secondary schools, gifted students