

## **ABSTRACT**

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Title of Bachelor thesis: Molecular mechanisms of cancer cells resistance to anticancer therapy

Tumor resistance is still the most common reason for the failure of anticancer therapy. The presented bachelor thesis serves as a summary of professional articles dealing with individual mechanisms of resistance of cancer cells to anticancer therapy. Selected mechanisms are described in detail, namely drug inactivation, alteration of drug targets, decreased drug uptake into the cell, increased drug efflux from the cell, repair of damaged DNA, inhibition of the cell death, epithelial-mesenchymal transition and metastasis, and epigenetic effects. Studying and understanding these mechanisms taking place in tumor cells is crucial for selecting the right treatment and for its success.